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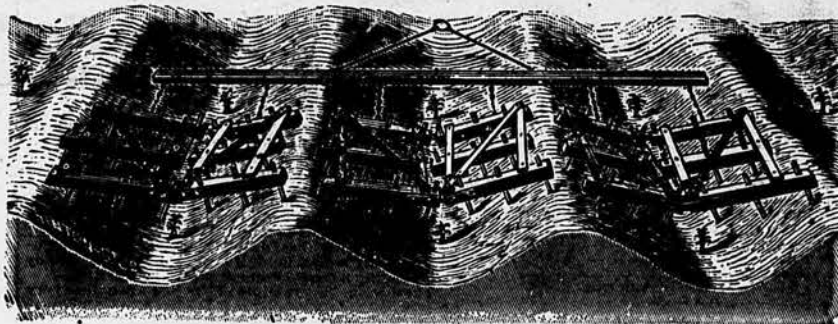
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OFFICE STATE SUPT. OF PUBLIC INSTRUCTION,
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Agricultural Matters.

THE FARMER IS KING.

An address read before the Farmers' Institute, at Gardner, Kas., Dec. 3 and 4, 1888, by Mrs. Thos. Darc.

Surrounded as I am, with the products of the farm and garden, I cannot but feel that we are no longer known as simply a farmer, a farmer's wife, son or daughter. It is known and acknowledged that we stand to the front of all professions.

Does not a successful farmer have to be a mental as well as a muscular man? Does he not have to blend all the energies of mind and body together to succeed? It cannot be done without, for farming is now known to be a profession of itself. The farmer should cultivate his mind by taking the best farm and stock journals he can afford, and consulting with those of his neighbors, older in years and experience than he, that he may know the kinds of grain and fruit best adapted to the climate in which he lives. Next he must find just the best way to prepare the soil; different kinds of grain require different preparation of the soil. All this can not be done in one or two years; it requires a great deal of mental as well as physical labor.

While their grain and fruit is growing, they turn their attention to cattle, horses, swine, sheep, etc.; the best strains are looked for, bought and raised.

Thirty years ago this was not so much thought of, for scrub stock was just as good as the thorough-breds of to-day to the common farmer. There is scarcely an excuse for a farmer why he should not be successful; he has so many advantages that our forefathers had not. There is scarcely a farm implement that is inaccessible to the farmer, all of which are labor saving. It is absurd for the farmer to buy farm implements and leave them in the field where they were last used until eaten with rust, or spend three or four days, getting in readiness for spring use; they should be cleaned, oiled and stored carefully away. We must reap as we sow in all things. We have to take in consideration the losses of stock, the expense of help, in fact the cost and carriage of everything. The stock has to be properly sheltered with good, warm stables and sheds.

When we look back through the vista of time and see our beautiful State of Kansas as it was thirty years ago, the many broad acres of untilled soil, the prairie grass waving and tossing like the mad sea, it was a beautiful sight, no mountains or trees to throw their

shadows around us, but few cabins, and those were dotted here and there. Yet there was a grandeur in the sight that cannot be expressed, there were social gatherings then as now, the carriages were lumber-wagons, the steppers were oxen. It was then the farmer's wife thought of the dear old farm at home and mother.

It can scarcely be realized by those who come to-day to make their home with us as they look at the beautiful homes of many of the farmers, at the large fields of wheat, oats and corn, the tame pastures and large herds of improved stock of all kinds. It has been made through the industry of the farmers; they do not know the many privations and hardships they have gone through to have accomplished all this. Are not the merchants, the lawyers, the mechanics, all dependent upon the farmer? The grain and hay they use for their horses, the farmer brings to the city for their use; their vegetables, flour, poultry, butter and eggs, are brought in by the farmers. Even the poor do not have a greater claim upon us; is not the farmer in duty bound to acknowledge their claims? Why is not the farmer a king? His talent is not confined to the farm alone; is not his success based upon the interest he takes in his home and community in which he lives?

Let us throw all partyism aside and look at the farmers who, to-day, fill our Senate chambers and legislative halls; let us again bring back the memories of thirty years—it was very rare the son or daughter of a farmer was educated for a teacher; to-day the educational and agricultural advantages are such that the farmer's son and daughter can, by diligent and hard study, come prepared from the district school to begin life's labor for themselves. Every advantage is given them, and, at the expiration of their school days, they may make their choice from the many professions surrounding them. Your daughter may claim the same position as your son, command the same wages; and why not? God's best gift to us is health and strength; with this the farmer's wife is always busy; each season brings its special work to her, poultry, butter and flowers being her most interesting work. For poultry, she chooses and buys the best for table use and egg producers; she, like the careful farmer, reads and experiments until satisfied she has chosen the best for farm use; her butter she churns and prints with pride and care. Flowers are the joy of her life when tired and the day's work is done. Again comes the time for canning, pickling and preserving her fruits. With what pride and satisfaction she enumerates the fruit she has disposed of when the evening's work is finished, for she feels "that what is worth doing at all is worth doing well."

Is there ever a time when she is not thinking and planning something for the comforts of home? Is not her brain doing its work? Does she not aspire to something higher than dish-washing all her life, (dish-washing is not degrading, but the novelty soon wears off)? Is it not right she should acquaint herself with all political news, all this is high and noble, take an interest in the lives of others, try to encourage, to elevate to the highest degree those within her own home?

The time has come that the farmer's opinion and advice is looked for; he stands on an equal with all; he enters the home of the rich and the poor alike.

Because we are farmers, there is no reason we should be barred from the homes of culture and refinement. We have the same opportunity to improve our mind as the merchant or doctor;

we may look at the statistics, which will tell us that the greater proportion of the inhabitants of our country, live in rural homes and small villages.

The moralist will speak of the advantages our boys and girls have, which is, comparatively speaking, free from temptation. There is a freedom there they cannot find elsewhere.

Time has plowed its deep furrows on the farmer's brow, but there is a peacefulness there inexpressible. For while he sleeps there is something growing, for we'll—

Track the plow, and the seed we'll sow,
Amid the furrows brown;
The weeds may grow, but the ground we'll hoe,
And out them boldly down.
The bee shall hum, and the summer come,
And the grain shall grow the more;
While under the dome of our harvest home
We will gather, in joy, our store.

Pardon me, but I would again bring before you this picture which more fully expresses my subject. On the right we see the minister who is supposed to teach us the lessons of truth and right, and says, "I pray for all." The farmer, if he be a Christian, listens, and prays that he may be prosperous and able to pay his portion for the teachings of the bible. We then come next to the merchant. He is social and obliging, he shows his goods and measures them out by the yard or pound and says, "I trade for all;" the farmer is again called upon to exchange grain and hay for cloth and groceries. The lawyer who "pleads for all" comes to the rescue of those who are unfortunate enough to have a quarrelsome neighbor, and if the case is lost, perhaps the farmer's home finally settles that debt. Upon the left we see the brave soldier who leaves family home and friends at the call; he feels it his duty to obey, and says, "I will fight for all." Some may be too old, others not inclined to go, but some farmer must stay to care for the ones left at home. Next is the railroad monopolist who says, "I carry for all;" he does carry the farmer's grain and stock to market, all of which the farmer pays well for. The doctor is brought to view who "prescribes for all," whom the rich and poor come to at all times. Sickness will come, and the farmer may be unprepared, but that debt may be paid with "bring me in a little corn and oats."

We have now before us the man who is chosen to help make our laws, he exclaims, "I legislate for all;" is not the farmer included in this honor too?

The center attraction of this picture is the sun-burned cheek and broad-shouldered farmer who stands in the midst of his surroundings, with spade in hand ready to turn the soil, but casting his eyes upwards to the crown bearing the beautiful word, "Liberty," he says, "and I pay for all."

Wheat-Growing in Kansas.

EDITOR KANSAS FARMER:—Pasturing wheat is thought by some persons to be a great damage to it, especially in the latter part of winter, but my experience is that wheat pastured in winter and early spring yields from five to ten bushels per acre more than wheat that has not been pastured. If it is a wet spring it does not make so much difference per acre as it does in a dry one. For the last seven years my wheat has fallen below an average of thirty bushels, but generally stood from thirty to forty-one bushels per acre, with the exception of two seasons: first, the wheat was where it could not be pastured, and the chinch bugs injured it; second, the wheat was nearly ruined by the fly. You must remember that this wheat was raised in land that had been in cultivation over twenty years.

I do not plow over three inches deep unless the ground is very trashy or

weedy; then I harrow it until the dirt is packed as close as it was before plowing. My reason for plowing shallow is that wheat roots are short and get nearly all their nutriment within four inches of the top of the ground, and wheat will not stool much until the roots get to hard ground, and if wheat does not stool well it will not make a good crop. Right here pasturing helps to make strong stools, the larger ones being bitten off gives the smaller ones an equal chance. These outside shoots must have their own roots running downward or they will never make a head. Wheat has two sets of roots, one for fall and one for spring. Fall roots run straight downward, and spring roots come out from the side of the stool and slant downward. If the wheat is sowed too early these fall roots get their growth and the spring roots will also obtain part of their growth in the fall, and the wheat will have a yellowish cast through the winter and spring, cannot make a good crop. In order to prevent this, sow between the 15th and 20th of September, that is in the central part of Kansas. Last season's crop I sowed about two quarts of salt to every bushel of wheat, mixing it when putting in the drill, and I never had nicer or plumper wheat; it weighed sixty-two pounds to the struck bushel, although there were millions of bugs in it from spring until harvest, and being the only piece of wheat in the neighborhood, all bugs in general seemed to have a special spite at it, yet this wheat yielded over thirty bushels per acre, machine measure, and was pastured close until the middle of April—fifteen days later than I generally pasture—with hogs. Cattle are too heavy for spring pasturing. The benefit derived from spring pasturing is that the soil which has been loosened by freezing and thawing during the winter is now pressed down and keeps the bugs from going to the tender spring roots and sucking the life out of the plant.

Do not understand me to say wheat cannot be raised on deep plowing. It will sometimes do well in spite of deep cultivation. For instance, if the ground has been plowed long enough to get settled, or had a big rain or two and has had time enough for the action of the elements to replace the plant food that you have turned under so deep that it is no benefit to the present crop, and wet spring following, so that the soil will not be too loose; otherwise, bugs or dry weather will shorten the crop. I will have more to say on plant food hereafter; I will also tell you my way of disposing of bugs.

"OLD FOGY."

In cases where Quinine utterly fails to have any effect, and where the patient cannot take it by reason of its unpleasant influence, a cure is promptly obtained by Shallenberger's Antidote. It cures immediately. In no case will there be more than one chill after the first dose, and in the majority of cases not even that. Sold by druggists.

"For peculiarly soft yet penetrating shades of color, marvelous grouping in form, fantastic, solemn and tender shaping of rugged cliff and mountain and valley," says a distinguished artist, "the wonderful empire of Colorado stands peerless." The Alpine scenery along the line of the South Park Division of the Union Pacific in Colorado is the most magnificent in the United States.

Moran, the great artist, despaired when he saw the Great Shoshone Falls—it was so far beyond his pencil's cunning. So there are wonderful dreams of beauty in the tempestuous loveliness of the grand "American Alps" in Colorado, which are at once the aspiration and the despair of painter and poet. Splendid beyond comparison is the superb scenery along the South Park Division of the Union Pacific in Colorado.

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised, or are to be advertised, in this paper.

MAY 10—Geo. Fowler, Herefords and Short-horns, Lincoln, Neb.
MAY 20—Hon. H. M. Valle, Short-horns, Independence, Mo.

PAST, PRESENT AND FUTURE OF THE MERINO.

A paper read before the Michigan Merino Sheep Breeders' Association recently by W. E. Boyden.

In considering the past, present and future of the Merino sheep, it will perhaps be as well to dwell more fully on the future of this great industry. As your humble servant knows the least about this part of the subject, he therefore can write very understandingly, as it sometimes seems to me that so-called great writers write the most upon those subjects of which they know the least. The past of the American Merino stands written in history, scarred with the signs of the times; now in the heights of its supremacy over all breeds, then clear at the bottom of the scale, being slaughtered for its hide and tallow, then rebounding again to heights never before thought of. The past of this industry must hold many pleasant thoughts for Michigan's older breeders, for in looking back it seems but a little while since, if you were to call on one of our older breeders, you would, if they were at home, find them at the sheep barn looking after the wants and comfort of their pets. Who does not remember the interest manifested about the sheep pens at our leading fairs; how excitement ran high at State and local shearings; how we all hurried for Diamond's forty-four pounds four ounces (not raw material, as some would class it)? How pleasant it would seem, as well as how natural to some of our older breeders to price sheep now as they did in the late past, when plenty of men were more anxious to pay dollars for sheep than to pay cents just now. Should those times come again, and we young breeders get startled at hearing our own voices in our own sheep pens naming such prices, we can do as did the man elected to the office of township justice, who, fearing he would be startled by the high-sounding title of Squire when accosted by his neighbors, made himself familiar with the sound by placing his head in an empty barrel at the barn and shouting "Squire So-and-so." Should those good old times return we will try and get used to them.

But the past should hold—and it is my belief that it does hold to many of our old breeders—pleasant memories of the hard-fought battles of the show ring and shearing pen, and of the many new acquaintances made at such places. How pleasant to look back over their past record and be able to feel that they have done right and have so dealt with each of their many customers, that they can meet them all frankly, pass the time o' day, and have none of that kind of "I wish I wasn't here" feeling exist. I think as a rule Michigan's older breeders will compare favorably with those of any other State in this respect. Let our younger breeders so shape their course now, that when the present method of Merino sheep husbandry shall appear as a chapter of the past, they can have it read aloud without the blush of shame mantling their honest brows. Let us strive to ever raise rather than lower the high standard of this grand cause; the only true way to obtain the respect and confidence of others is to merit it. It may seem a long time coming, but it

will reach us at last if we are only deserving and patient.

The present of the Merino sheep industry is with us, and apparently so real that it needs but little introduction. I believe that in the present great depression of our chosen calling many of us are learning lessons that will be of great benefit to us in the future; surely such times test our staying qualities. Is it swimming with the current that tests the strength of the swimmer? No. Is it by drawing a light load on a level or down grade that you would test the power and endurance of a draft team? When testing a new self-binder would you select light standing grain, or heavy grain badly lodged? It is by fire that the pure metal is separated from the dross. By adversity we can determine who are friends and who are not. It is by work and fatigue that we enjoy rest; by earnest pursuit that we attain.

Who did not want to be a sheep man a few years ago, when everything connected with it was booming? It is in such times as those that men take up the business only to drop it again as soon as the novelty wears off or there is a lull in the trade. When the boom is on we can all float along with the current, or stumble down hill with pretty good grace, but when it lulls, where, oh! where are we who were just drifting along?

It may not be Christian-like, but I say that those of us who can't, or rather can and don't stand by our favorites in times of depression, were better out of the business, as we are not apt to do it any good, and may easily do it and others who wish to stand by it, harm. If we have decided to stand by our pets, let us put on a bold front and bid defiance to all mischief-makers. Let us breed and feed just as well, yes, even better than when everything is booming; let us demonstrate by living examples that we have faith in the good old ship, and that we have good grounds for our faith. I claim that just such periods of depression are good for any breeding industry, as it is in just such times as the present that the knife and butcher get their share, there being no temptation to reserve any but good ones for breeding purposes. They must not only be well bred but must be thrifty and robust, and capable of returning a dual coupon—a good lamb and a heavy fleece of marketable wool.

The future—how shall we judge it if not by the past? We who are mortal knew but little what it has in store for us; and it is well that it was ever so, for could we but unveil the hidden future, life would have lost its most potent charm. The future of our careers as breeders of Merino sheep in a measure is what we make it; for as long as time exists the people of the United States must be fed and clothed, and it will devolve upon the American Merino to do its share. It rests in a great measure with us as breeders whether this be an important part or not. I say, let us take second place to no breed of sheep yet produced. But how are we to proceed to bring this about? This question each breeder must decide for himself; and should any of you be so fortunate as to get a corner on it, please send formula with full directions how to apply, to your humble servant.

I think one thing in our favor in the future is the present generous use of mutton-bred rams on the grade Merino flocks of Michigan, for this can be carried on but a few years at best without resort by purchase to fresh breeding stock, and where are they to come from if not from the use of Merino rams upon our native or grade sheep? At present prices we can't afford to keep a ewe just to raise a market lamb. Some advocate breeding this way,

some that way; but a fool's advice to you is go slow in departing in any direction from what constitutes a typical Merino. It has taken years to produce our present high type of the improved American Merino; and canvass well in your own mind before you throw this away on some one's hearsay or pet theory. I don't wish to be understood by this as advising either extreme. Breed good common-sense sheep that will shear a profitable fleece of wool, and when fattened, at maturity will weigh 140 to 170 pounds for rams, and 100 to 120 pounds for ewes. I will leave it to some more clever pen to tell how to breed such sheep; but it has been done, is being done, and will in the future I hope be more extensively done. It seems to me that with the affairs of our government once more in the hands of those who believe that protection is a guard against unequal competition, the American Merino still has a future. Let our earnest endeavors be to have them fill this future to its utmost. Let us stand staunch and true, dealing honestly and fairly with all, and united as by a band of good fellowship to each and all fellow breeders. My word for it, before another two years roll round we will be sailing in more pleasant waters.

Points of a Good Horse.

A good horse is one of the most companionable of creatures, and among the chief points of value are his intelligence and capacity for endurance. The English people have long been noted for their love of good horses; so long have they been training this useful animal, that they are perhaps the best judges of horse flesh and horsemanship in the world, not excepting the Arabs. We copy the following from the London *Agricultural Gazette*:

"The first consideration is posture. A horse standing should come well on his legs; that is, his fore legs should be placed well in front, his hind legs under the incident of weight or the point of the quarter. Horses of value cover their ground long, low, naturally and wide. The happy hit of strength and refinement. Marketable anywhere and any day. The limbs should be placed well outside the body—that is, long and prominent elbows, bold, well-placed stifles on a line with the elbows. Feet should not turn in or out, but point forward. Odd feet are the sign of disease, past or present, in a chronic form. Harmony of proportion is a sine qua non here. Length under a horse must be gained by a deep reclining shoulder. His height through the floor of his chest up to his withers, and not by his legs. Width at the shoulder points, and with a deep, wide and capacious middle, width at his hips. The position of the fore feet is regulated by the shoulders; in the hind legs, by the width of the pelvis or hips. A horse may be taught to stand, but the judge demands a natural rather than an artificial or educated pose. Legs should be short, stout, with muscle, and clean along the tendons. Knees well to the ground—that is, short cannons, likewise the hocks well down. In examining a horse don't approach too closely at first; let him form the base and you the apex of a triangle; you then can catch his ends. It is early enough to go up to him when you desire to manipulate him for splints, spavins, etc. So much for the profile. A horse is said to have a riding angle, the acme of perfection for all work, where a line let fall from his pole just grazes his nose. Manners maketh both man and horse, and without this angle we can have no true manners in either harness or under the pigskin. A long rein or upper line to the neck, and a clean articulation or junct-

tion at the head and throat, are essential as contributions to perfection. A full throat is an index of full wind. The head should be bloodlike, and convex for courage at the base of the ears and across the eyes. The head should be full, yet neat, no coarseness at the 'race' just above the nostrils. A moderately long neck for comfort. This, with a moderately fine wither, gives you a light forehead—a horse before you. Necks should always be muscular, of moderate length. The breadth of chest depends on the breed and trade. We will now only deal generally in points and make, but for galloping a deep thorax rather than a round one admits of greater expansion under efforts of endurance and extreme exertion. Stand well in front of a horse to see this. Then pass to his rear, and judge the quality and muscularity of his hind quarters. Stand well back here, and stepping two paces to the side gives you "form at a glance," or the concert of points from his head to his middle and quarter. You must go around a horse on a system to save time and gain an accurate judgment. The quarter should be wide haunches well let down, and always neatly closed in horses worth the name. Light ends in the fore hand, volume and area superficially in the middle, massive hind quarters, and four good feet well placed, legs like bars of steel."

If farmers use flaxseed in one form or another for their pigs, they will find it useful both as a food and as a medicine. Prof. Stewart says that flaxseed properly used is a preventive of disease. Its oil is soothing to the stomach and intestines, and is also rich in food for muscle and bone. It ought to be boiled before it is used. Take about six times its bulk of water, boil until it forms a jelly; then mix with wheat bran. This is good also for the mother as well as the pigs; it assists in the production of milk, and is a good muscle and bone-builder. And then, flaxseed may be ground with oats in the proportion of one bushel of the former with eight bushels of the latter. Mix 100 pounds of this ground oats and flaxseed with 200 pounds of bran; this is pronounced one of the very best kinds of food for young pigs, and it will be good for them from that time up to fattening. It keeps them smooth, clean and healthy.

Stamping and Embroidery.

"Yes, Lizzie I like to do fancy work, but I haven't felt like trying that pattern—or anything else—for a week. These awful 'dragging-down' pains are just killing me!" "I know how you feel, and I can tell you where to look for relief. Dr. Pierce's Favorite Prescription is a certain cure for all those peculiar weaknesses and distressing ailments. Why! it even cured me of prolapsus, and many of my lady friends have been cured of various grave maladies peculiar to our sex by this wonderful medicine." It is the only medicine sold by druggists, under a positive guarantee from the manufacturers, that it will give satisfaction in every case, or money refunded. Read guarantee on bottle wrapper.

Bulls for Sale.

Fifteen choice Short-horn bulls, from 8 to 20 months old; also a number of choice heifers. Will sell at reasonable prices on terms to suit purchasers. Address T. P. Babst, Dover, Shawnee Co., Kas.

"They rested there—escaped awhile
From cares which wear the life away,
To eat the lotus of the Nile
And drink the poppies of Cathay."

And every American business man is beginning to find that his summer vacation is more and more of a necessity; the money-making machine won't stand the strain without an occasional rest. The "American Alps" of Colorado offer the highest conditions for perfect relaxation, pure vital air, comfortable hotels and the noblest scenery in the country, and may be reached on the South Park Division of the Union Pacific railway.

In the Dairy.

CREAMERY MANAGEMENT.

Address delivered by J. E. Nissley, of Bell Springs Creamery, before the Kansas Butter and Cheese Manufacturers' Association, at Salina, April 10, 1889.

MR. PRESIDENT AND FELLOW MEMBERS:—Responsive to a call from our Secretary, I am here to-day with a brief preparation, the substance of which is based upon creamery management.

But, as "Rome was not built in a day," or our great and acknowledged dairy State of Kansas, cannot be reverted from a strictly beef-producing to that of a dairy State in a day, so with the perfection of creamery management. And while I may have an opinion of the ideal creamery management, does not infer that I put that in practice to the letter abruptly, or expect you to go home to your respective creameries and do likewise. I only give my views of the matter for your consideration, and to which I shall work up until it is as near perfection as my frail efforts will permit, or some one points out a better way. In studying so varied a branch of industry, we are confronted by the thought that this particular branch, the management of the creamery, is oftentimes not in the strictest harmony with energy, perseverance and truth. Three prominent features are connected with the management of the creamery, and hence, I have divided it thus:

First.—The manipulation of the milk and cream, or factory management.

Second.—The dealing with the milk and cream-producers, or outside management.

Third.—Disposal of the product, or business or commercial management.

Factory Management.—Now let us go to our own creameries and call out our very best forces, to the work and management, of making the butter. Of all the doctrines and theories that have been advanced, there are, after all, only two ways of making butter—a right way and a wrong one. You can either make good butter or poor butter; and woe unto the man who says he "can't make good butter," for he shall be cursed by the consumers of that detestable stuff, and tortured by those who reap the reward of his loathsomeness—his patrons. Well might it be said, that it were better for him that a millstone were hanged about his neck and that he were drowned in the first batch of milk that he bought. From nothing nothing can be taken. I will modify that slightly; from poor milk or cream can be taken only poor butter. So here now we come to the first essential duty connected with creamery management—the necessity of securing nothing but good, pure, sweet milk and cream. Cleanliness about the building proper; care of the cream while ripening; conscientiousness in churning. There is practically only one time for stopping the churn, and that is the proper time; not one-half minute sooner or later. Working butter and packing it has its requirements, but suffice it to say all these are small matters, but they make up a monstrous whole. And every one of you that is connected with a creamery (and I have no doubt but what all present are) will agree with me that those little things, the attention to details, weighs like gold on the profit side when you make up your balances. There is nothing about the creamery but what needs close watching, and the manager should personally inspect every detail of work from the sweeping and scrubbing of the floor to the packing of the butter. A systematized and routine mode of performing the many duties about the creamery

should be adopted and early implanted in the butter-maker and his helper.

OUTSIDE MANAGEMENT.

Of course we have a long list of these to keep account of, and that the strictest accuracy should be followed is unquestionable; each patron's milk for the day must be properly credited, and butter, also skim-milk taken properly charged. To do this requires special attention, not a slipshod or haphazard way of doing it. It must be done and managed so as to give the most possible confidence and satisfaction to the patrons. Manage to have the best of care taken with the milk whilst in their hands; instruct them to cool it well, keep their utensils well cleaned, feed the best possible food; teach them all you can and don't make a double blunder by thinking that they think as you do, that they know all about it and can't learn more, can't attend dairy meetings, can't afford to spend a dollar for some good substantial paper, when the facts in the case are that they don't know the first rudiments that constitute a first-class dairyman. I tell you, gentlemen, these are facts, and we have long ago been taught by our schoolmasters that "facts, like mules, are stubborn things," and they must be grappled and attacked with the fierceness of a bulldog seizing his prey, or else all efforts will be in vain.

BUSINESS MANAGEMENT.

While this is last in the order named, it is still not one iota less important. With crowding and envious competitors behind us, following closely in our footsteps, and a thousand dainty palates to satisfy, makes this feature of creamery management the most conglomerated of all yet named. It is as necessary to understand the selling of an article as it is to make it. New markets must be kept in reserve, old ones must be courted. Extortionate middlemen must be scrutinized, credit must be established and maintained, and a general survey of the whole proceedings constantly taken. These constitute, briefly, the commercial or business management of the creamery.

Much more might be said separately on the different topics, but I shall not encroach upon your time; and I will now for a short while draw your attention to the principles of a creamery manager, so as to involve factory management, outside management and business management all in one. The fact that a man if a competent butter-maker, or an accurate accountant, or a financier only, is no evidence that he is capable of managing a creamery. You may hoot at the idea, but I believe it would be to the best interests of the people of Kansas (or the people of any State, if you please,) if those persons who wish to place themselves into the management of a creamery be put under rigid examination and required to answer a series of question satisfactorily before some board of examiners who would be authorized and qualified to make such examination. It is certainly very essential. It is not a small matter to manage a creamery. I regard it as a very complicated affair; one that calls into action nerve, muscle and mind in the most stringent manner possible. Why, think for a moment a host of producers on one hand and equally as many or more consumers on the other hand, and the creamery manager as a mediator in the midst of them trying to intercede for their best wishes, etc. I tell you it is a position not to be coveted at all, and like a father who so jealously watches over his little flock, must be conscientious, so as not to be partial. With a thousand hungry mouths, a thousand dainty palates, and a thousand spare pocket-books

that want to be satisfied, while the others are asking for a more liberal compensation for their product. All are looking to you and pleading with plausible stories, and you must hear them. Methinks I hear the reverberating echoes, "more salt," "less color," "give better weight," "keep prices down." While the last dim echo is vanishing, I hear gruffly and forcible on the other side, "what are you paying for milk?" "Is that all?" etc. You who have experienced this can heartily sympathize with one another, and those of you who have not, allow me the privilege to congratulate you. Excuse the expression, please, but this is one of the "white elephants" on the creamery manager's hands, and the question arises: what must we do or what shall be done in order to pass these critical ordeals, to the best satisfaction of all concerned? I believe a thorough knowledge of the combined forces embodied in my text will bring the answer. The creamery manager must be a sort of main-spring to the whole affair, a central point, headquarters for all. Like a Sheridan, who with indomitable pluck and training turns the tide of battle from defeat to victory; the same rule holds good in our creamery warfare. The right man with a thorough training in factory management, outside management and business management, can upon the very eve of failure turn the tide to success.

Should the Dairy Interest be Extended or Diminished, and in What Direction?

Read by Charles K. Harrison, at the Farmers' Meeting at Pikesville, Md., February, 1888.

It will be useless to take up your time with statistics, or to dwell at length upon the causes of the depression in almost every branch of agriculture; there may be different opinions now as to the causes that have led to this, though an increasing number of persons are daily coming to the conclusion that the policy that fosters monopolies, trusts, and pours money into the pockets of some citizens at the expense of vast numbers of others, and among these the farmers and all who are engaged in agricultural labor, is really at the bottom of our agricultural depression, and with this sentiment I most heartily agree.

I will now dismiss this part of our subject. We are especially interested in trying to live while this condition of things exist. We who have Baltimore for a market, one of the largest and most populous cities in the country, want to supply the needs of Baltimore and our proximity, if trade were not interfered with by unnatural conditions, should at least place us ahead in the race to do this. What are the needs of the Baltimore market? and how much of our dairy product will she take at a remunerative price? This is an all-important question for us.

Now I look upon the sale of milk as the most remunerative form of dairying, first, because it does not have, as is the case with other dairy products, to employ especially skilled labor to manufacture it into butter or into cheese; and, second, because at the prices now prevailing, a cow will yield more money by selling her produce as milk than she will by selling it as butter, and more by selling it as butter than she will by selling it as cheese.

Now the market for milk at a remunerative price is a limited one, as in case it is overstocked, it cannot be shipped away to supply other points, as butter and cheese can be, owing to its perishable nature. The milk trade has not escaped the depression affecting the other products of the farm. The unprofitableness of general farming has

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induced many persons to seek relief by shipping milk to Baltimore, and since I first went into the business nearly twenty years ago, the price per gallon to the farmer has fallen from 25 cents per gallon to 16 cents a gallon, and milk can now at many seasons be bought at 14 cents. Mark, that while this has taken place, and you must bear in mind this is not net, but means delivered in the city, the farmer having to pay the freight, there has been little or no decline in mill stuff, and only a very slight one in fine ground corn chop, whilst labor, of a kind indispensable to successfully pursue dairying, has hardly declined at all.

I now pass to what I conceive the second most remunerative product of the dairy—BUTTER! Here, for a good article, the market is almost unlimited, at a remunerative price, and if we can prevent dealers in tallow and grease from selling imitations of butter, such as suine, butterine, eleomargarine, for butter, we shall find this a very remunerative product of the farm.

I do not believe in laws being made to prevent people eating tallow or anything else on their bread, instead of butter; laws, if made, should be made to prevent fraud and punish crime, and it is as much a fraud to sell butterine under the guise and color of the product of a cow, as it is to put a false bottom in a peck measure, or to sell light-weight pound prints. A farmer would be called a rogue who did this, but he sees every day his products imitated, and the public induced to buy what they believe is made from the milk of the cow. People eat food of many colors; there is nothing distasteful in the color of molasses; why not then forbid this butterine being colored yellow, or any of its shades? Here is where the fault lies. Now any shade of red, blue, green, brown, in fact any color except yellow or its shades would suit the farmer admirably; indeed, pure, dazzling white, clean, fresh—the emblem of purity; this would be highly satisfactory; there would be no sailing under false colors then, and we should not fear, nor need we, any competition, and if the public liked butterine better, we could neither justly or honestly complain.

Now let us pass on to CHEESE. This is a product of the dairy, that to discuss in all its bearings, from cream cheese to Gorgonzola, would consume more time than is allowable, nor do I think we can profitably do it; our high-priced lands would only admit of our making the very finest grades of cheese, and nearly each grade is an intricate art, and while by co-operation we might support a skilled maker, neither the butter or milk market is in a state that makes this necessary. No ordinary cheese pays a price that would induce any farmer to go into its manufacture who is located as we are.

Now, my friends, the vital question

for us is, by what means can our dairy be made to net more profit? This is the practical point—how can we get better returns than we do now, or can we get better ones?

Milk! Butter! Cheese! Will milk pay at 16 cents a gallon, butter at 40 cents a pound, or cheese at 20 cents? Will dairying pay?

Yes, certainly it will, but upon the sole condition of each cow yielding a certain quantity—this is the key-note of the whole subject; the cow will cost in labor and attendance and feed just as much if she gives 16 cents a day return, as she will if she gives 32 cents a day return. Our difficulty is our cattle do not yield enough; it makes no difference if you call the animal native, Jersey or Short-horn, she will cost you a day about 16 cents to feed, and her attendance 6 cents more; when she eats your own hay or corn, you will be selling to her instead of to a dealer, which is a point gained, but after charging her with it, she ought to show a profit over and above this 22 cents she is charged with each day. She will cost you \$74.30 a year, allowing her to go dry eight weeks; taxes and other charges are not included in this. Now she should give you 800 gallons of milk, 300 pounds of butter, or 600 pounds of cheese a year, to make a fairly profitable return. I ask how many farmers obtain such results from their cows? Does the average farmer take steps to raise and retain such cattle? This result is by no means unattainable, for many individual cows far, far exceed it; farmers are not alive to this, the real live issue, the difference between an 800 gallon cow and a 600-gallon cow. Few would hesitate to buy a 600 gallon cow if offered at \$40, when the 800-gallon cow along side of her was held at \$65 or \$75, though the latter would pay as much profit as the 600-gallon cow the first season, and her additional cost into the bargain. This I conceive to be the point in which dairying should be pushed; it is not butter, cheese or milk, it is not 16 cents a gallon or 40 cents a pound, it is excellence in the cow, and the farmer who has first-class cows can make money at any of these prices, yea, lower ones if they should come, and he who has not first-class cows cannot keep his head above water.

I have made no illusion to one very important matter, and as there is still some time available, I will bring it to your notice. Indeed, I once heard in this very room a discussion upon the subject, "Good Butter." Now this is a very wide-meaning phrase. I heard a farmer say in this room that he thought it was easy of accomplishment, and he or his wife, I forget which, could make as good butter as any that went into the market. This man I know to be a most excellent farmer, yet I am very positive he don't know what first-class butter is, and has never had a piece in his mouth, and while he knows well enough what sound, sweet butter is, could see no reason why his butter should bring 40 cents a pound and Darlington's 65 cents a pound, and would assure you that it was because Darlington had the trade. I have heard persons say they could not taste any difference between tame and wild duck, the one \$1 a pair, the other \$4 a pair; but we as farmers are concerned with what the public, our customers, think, and what they will pay for difference in texture, grain and flavor. Making prime butter is a difficult art, known to comparatively few; for a very small quantity indeed, of really prime butter, in proportion to the total production, is ever seen on the market.

Any man who can make, uniformly, such butter as the Messrs. Darlington do from native, not Jersey, cows, will

find that he has the trade; people, as soon as they are sure he can be relied on to produce it, will find it out fast enough. Of course bad butter or poor cheese will ruin the profit from the best cow in the world. Now, creamery butter, which is uniform in quality, sweet and good, is sold in our markets at 31 cents; the best Maryland prints 24 cents. Such butter as is made in some of the dairy districts of this country, brings 65 cents. I have a friend who has been in the dairy business many, a great many years; he gets for over 100 pounds a week 90 cents a pound, and his butter is in demand; it is as much better than 65-cent print butter as 65 cent is better than creamery at 31 cents. I mention these matters to show what can be accomplished. There are people who can taste no difference between claret at \$8 a dozen and claret at \$24 a dozen, and possibly the growers of \$8 claret can't understand why the growers of \$24 claret should obtain this higher price; they are in the same category with my friend the farmer who won't believe there is any difference between his butter and the highest-priced butter in the market.

What we farmers have to do is to produce what the public will pay most for. —American Farmer.

OKLAHOMA.

Now that the millions of acres of this magnificent country are to be opened to settlement, thousands of anxious home-seekers are pressing toward the "Promised Land." Twelve o'clock, noon, of April 22, 1889, is the time named in the President's proclamation when they can cross the line into Oklahoma. All who intend going should inform themselves fully before starting, as to the easiest, quickest and best way to reach the country in time to secure their homesteads and to be on the ground ready for business at the earliest possible moment. Examine the official maps and make no mistake as to your route. The Atchison, Topeka & Santa Fe R. R. is absolutely the only railroad built and operated into and through Oklahoma. Two daily trains in each direction through the country. The U. S. Land Office for the eastern land district of Oklahoma is located at Guthrie, directly on the line of the Santa Fe. The U. S. Land Office for the western district is located at Kingfisher Stage Station, thirty miles west of Guthrie and off the line of any railroad. Kingfisher Stage Station is, therefore, most easily reached via the Santa Fe to Guthrie, thence by stage. This is forty miles less stage ride and twelve hours shorter time than via any other route to Kingfisher. The Santa Fe Route connects with the important lines from all parts of the country, and reaches Oklahoma direct from Chicago, Kansas City, Leavenworth, St. Joseph, Atchison, Topeka, Abilene, Salina, Concordia, Minneapolis (Kansas), McPherson, Newton, Wichita, Winfield, Wellington, Caldwell, Hutchinson, Great Bend, Larned, Dodge City, Denver, Colorado Springs, Pueblo, Trinidad, Las Vegas, Santa Fe, Albuquerque, Socorro, El Paso, Deming and Silver City. For complete and reliable information regarding rates, tickets and train service, call on ticket agents of Santa Fe Route, or address

GEO. T. NICHOLSON, G. P. & T. A.,
A. T. & S. F. R. R.,
Topeka, Kansas.

P. S.—Ask for Oklahoma Folder containing land laws and correct sectional map of country.

It is un-American in the higher sense for our people to prate about Europe so glibly when so many of them are profoundly ignorant of the wondrous beauties of their native land. As a matter of fact there are hundreds of thousands of American citizens who are thoroughly familiar with Switzerland; who have idled away weeks at Lucerne, done Chamouni, and attempted the Matterhorn, and yet have never feasted on the lovely beauty, the wild weird majesty of any one of the Colorado Peaks. "More than Alpine glory" rewards visitors along the South Park Division of the Union Pacific in Colorado. There is no scenery like it in the new world.

Correspondence.

Cow Peas.

EDITOR KANSAS FARMER:—I spent the season of 1886 in Brazoria county, Texas, renting a farm within seven miles of the Gulf. In going from our farm to Columbia we passed an old deserted beef canning factory in which there had been stored mowed pea vines and also some oats. The horses and mules were allowed to run loose in the lot, and the pea vines were eaten in as far as they could reach before the oats were scarcely touched. This attracted my attention, and upon making inquiries I found they were the cow pea, and that they were grown there as food for both horses and hogs; also as a fertilizer, being plowed under when in bloom.

I procured a few quarts of seed and planted a small patch. Cut half the piece when they were in bloom, and got a second crop as good as the first, which our horses ate with a relish. We also saved about one bushel of seed from the other half, and that I brought back to my old farm near Richland, Kas. I planted them the spring of '87, but the seed being badly eaten by the Texas weevil, I got a very poor stand, yet saved about one bushel of seed by picking the pods. Then plowed under the vines. Planting this field the spring of '88 to corn, could tell the difference in the corn to the very row, the corn on the pea ground being much the ranker. In the spring of '88 drilled two acres to peas and oats with the following results: Cut one acre when the oats were ripe, the pea vines being quite small at this time, but got a good crop of vines that I turned under about the 1st of November for manure. The other acre did not cut until the 1st of October and got a good crop of peas.

Now I think we can get two crops off the same ground by following this plan, which I shall try in the spring: Drill oats at usual time, and as soon as danger of frost is past; then drill the peas right in the growing oats (or wheat), and after cutting the grain have a crop of vines for manure in the fall.

I intended to make some remarks about cutting, threshing, feeding, etc., but this is already too long, and as it is my first attempt at writing for a newspaper will stop.

A. A. DISNEY.

Richland, Shawnee Co., Kas.

Listing Corn.

EDITOR KANSAS FARMER:—Considerable experience in the use of the lister has convinced me that the advantages it gives over the ordinary mode of putting in corn are ability to plant and cultivate a greater number of acres with the same amount of teams and help, easier shucking, and an increase of yield of about ten bushels per acre. When I first commenced to list I thought it to be necessary to clean the ground of the cornstalks, but soon found that if they were cut with a sharp stalk-cutter that no trouble was experienced in listing or afterwards in cultivating.

I have found the proper depth for listing to be as deep as the lister can be run and make a clean furrow. If the lister is set too deep the ground will fall back from the ridge into the bottom of the furrow, and thus carry back weed seeds which listing intends to put between the rows of corn, where the plants that will surely spring up from them can be easily destroyed by the cultivator. I believe in running the sub-soller deep, but in the fore part of the planting, when the ground is cold, I think it is best to arrange the drop so that the seed will be caught near to the surface of the sub-solled earth.

I heartily indorse all that Mr. Kincaid has said in regard to the use of a properly-constructed harrow for the first cultivation of listed corn. For this purpose the common harrows are worse than useless. They ride on top of the lister-made ridges and roll clods and cornstalk roots down onto the young corn plants, to their great damage and destruction. I have never seen the harrow Mr. K. recommends, but know from experience and extended observation that the "Lister Harrow" made by the David Bradley Manufacturing Co. (late Furst & Bradley) of Chicago, is a very useful implement for first cultivation of listed corn. It is made in three sections, and each section cultivates a row of corn; a two-horse team eas-

ily draws the whole of these sections. The sections of this harrow are hinged so that they drop down into the lister ditch and thus bear against its sides; an automatic device prevents the harrows from dropping too low so as to drag the young corn. After harrowing once or twice, a wheeled two-horse cultivator is the best and only implement required to complete cultivation. Two plowings of the corn I think sufficient. Where corn is to follow wheat, it is best to list the stubble ground in the fall the same as if corn was to be planted, except that the sub-soller and planting attachment may be left off. Then, when ready to plant the following spring, do so by splitting the lister ridges made the fall before.

FELIX T. GANDY.

Wallace, Wallace Co., Kas.

Potatoes Again.

EDITOR KANSAS FARMER:—In your paper of March 21, by placing the word *each* where I did not mean it to be, I am made to say that I raised forty three bushels of potatoes from a row 100 yards long, while I wished to say that with one bushel of seed potatoes I planted five rows, each 100 yards long, and the yield of all was forty-three bushels. As I meant to be understood that would rate over 400 bushels to the acre; as presented it would be more than 2,000 bushels to the acre. I think your farmers would lack faith in such statement. A party here in New Jersey claims he raised 650 bushels to the acre. But I did not see the land nor the potatoes measured. In drills 400 bushels and over may be raised to the acre, but as an average crop in a country where potatoes are raised, 150 to 200 bushels will do. In the great valley of Virginia, some land yields many bushels of wheat to the acre, but it is estimated that ten bushels to the acre is the average crop of wheat in that valley. The other day a farmer of great experience told me that he had the best results in raising potatoes by taking his best mellow ground and plowing it one foot deep, then harrow it quite fine, mark it out one way a foot deep, plant in drills, covering cleverly. When the plants are up cultivate, each time filling the furrows up as the plant grows, so that by the time the plants are near ready to bud (when cultivating should stop) the ground will be level. Thus is hilling under ground, and in dry ground and a dry climate, I think it will do well; but in wet land and a wet season it would not do.

Glen Gardner, N. J. V. T. BOLTON.

Corn Culture in Western Kansas.

EDITOR KANSAS FARMER:—I notice a good many ideas suggested in your paper how to raise corn in western Kansas. Some of them sound rather strange and peculiar and new to many of us. I will give my views after eleven years residence in this, Stafford county. I want my rows four feet apart; closer than this too many blades get broken off going through the last cultivating; the blades are for a purpose and want to be saved. As well expect a tree to make growth without limbs or leaves. The seed I want drilled twenty-six and twenty-eight inches apart; this will give space for a good ear on each stalk according to the strength of the soil and not "fire" so readily. I want a sixteen-inch lister so I can lap the dirt well in center of ridges to avoid a stubborn row of wild sunflowers along center between rows if the first cultivating should get a little neglected. One man with a three-horse harrow can get over a good deal of ground in a day, while the corn is yet small, and keep ahead of the work; but when the two-horse cultivator has to be used, then comes the rub—too slow work—for one man and two horses to finish only one row at a time. Here a new implement of the near future is needed to make corn king in western Kansas, and that is a three-horse cultivator, so one man and three horses will clean out three spaces or three rows at one passage. Then one man can put in and tend sixty to seventy-five acres, and with average yield would have corn to sell and to keep. During our best seasons thirty-five bushels to the acre is a good yield for our soil, but the average is much less, so we must have suitable implements so one man can put out and tend more ground than is possible with the common two-horse cultivator. The writer has practiced considerable one-horse cultivating, finishing a space at one passage and don't consider it impracticable to con-

nect three single cultivators to a suitable frame carried on three wheels for three horses to draw it and one man to manage it all. This new idea brought to perfection we can make corn, cane, and fat stock of all kinds king in western droughty Kansas.

Ererson, Stafford Co., Kas.

Breeding Young Sows.

EDITOR KANSAS FARMER:—In reading in the KANSAS FARMER the articles "Raising Hogs," by J. A. W., Hiawatha, Kas., and "From Pig to Pork," by F. H. Zimmerman, of Nebraska, I see they don't let their sows have pigs at 1 year old or don't practice what they preach. I believe in quick work or early maturity in hogs. These men don't say how they keep up their numbers. From beginning of J. A. W.'s article he must have pigs come in spring, but if he don't keep old sows and don't breed a young one till she is 9 or 10 months old, how about his "crop" next spring? The Nebraska man says "it would be better if she was not bred until she was 12 months old," and as a sow goes from 112 to 116 days, these fellows would have piglets come about six weeks to two months later each spring than they did the preceding one; consequently would soon have them all come in the winter time. I am young in years and in experience in hog-raising on my "own hook," but my father is quite a successful hog man, and the plan he has been working on for several years has been to buy early in fall one or more No. 1 hogs (spring pigs) as the number of sows to breed required; keeps boars in well-fenced lots with good houses, lets sows to them as J. A. W. suggests, breeds to have pigs begin coming about middle of April and to come as fast after that as possible, weans pigs about 1st of July, rolls corn to sows and turns them off in September, fattens all best barrows and what largest sows he doesn't wish to breed, for market about holidays, and youngest barrows and little sows for the June market, and so on. Sows scarcely ever have trouble farrowing, and when kept till 18 months old generally average about 400 pounds. Don't think his hogs are degenerating very fast. He kept one sow over last year, sold her in winter, weighed 575 pounds. She had litter of pigs May 1; he bred one of the sows November 19 and sent her to me as a Christmas gift, and March 12 she had seven pigs that are "dandies" and would do well weaned now, as they all eat, and I can breed sow again and she will be with her second litter close after these other fellows' sows with their first. My sow will probably not be quite so large, but I think the extra litter when driven onto the scales with her will require the weighmaster to slide the "P" out a good ways farther than where it stood when J. A. W.'s or F. H. Z.'s sows were on. I am counting now that we are all raising hogs for the hard dollars and cents there is to be obtained from selling hogs by the pound. I'll admit that in raising pigs strictly for stock purposes, for extremely heavy weights, or for the show yard, it is desirable to breed from matured boars and sows and those that haven't been stunted.

H. G. KIDDOO.
Cabbell, Logan Co., Kas.

Weather-Crop Bulletin

of the Kansas Weather Service, in co-operation with the United States Signal Service, for the week ending Saturday, April 20, 1889:

Precipitation.—There has been an excess of rainfall in the counties south and east of a line drawn from the northeast corner of Ford to the mouth of the Kaw, in Lane, Saline and the northern portion of Cloud. A deficiency for the week exists in the northeastern, northwestern and southwestern counties. Heavy hail on night of 15-16 in the eastern portion of Lane, on the evening of the 16th in Stafford, and on the 17th in Edwards and Stafford, with light hail in Butler, Marion and Shawnee.

Temperature and Sunshine.—During the first days of the week the temperature was kept several degrees below the normal by the northerly winds and cloudy weather, but has risen above the normal the last days. Cloudy weather prevailed four days out of the seven.

Results.—All small grains are sown and generally up. Corn-planting has been much retarded in the southern counties by the rains. In the northeastern counties the cool weather has delayed the leafing of the trees,

which is progressing rapidly in the central and southern counties, but is most noticeable in the extreme west where a large planting was made last year and where vegetation of all kinds has been very favorably affected by the weather conditions. In the central counties of the west the wheat is twelve inches high and as far advanced as it was the latter part of May last year. On the 16th old chinch bugs were quite numerous in the air from Woodson to Clay inclusive but disappeared during the rains of the 17th. The hail in Edwards and Stafford cut off many fruit blossoms and beat down the growing grains, which will set them back some. The large stones broke much glass in Stafford, cut through some roofs, and killed some hogs.

T. B. JENNINGS,
Signal Corps, Assistant Director.

Farmers' Alliance Notes

Organization or combination seems to be the order of the day for every interest, and unless farmers are prepared likewise they will become the common prey of other combinations. In union there is strength. Organize.

C. A. Tyler, Burrton, Kas., State Purchasing Agent of the Alliance and Co-operative Union, visited every county meeting held in the State during April. From him we learn that every County Alliance was unanimous in pledging that they will not buy any binder twine for any sum in excess of 12½ cents.

The officers of the Alliance are cordially invited to send us promptly any news pertaining to the order that will be of general interest to our readers. We expect soon to complete all arrangements for making this department a valuable feature. Meantime we hope to receive the hearty co-operation of the membership as well as its officers.

This office received a pleasant call from Mr. McDowell, Vice President of the National Alliance and Co-operative Union, last week. He has delivered several addresses to immense audiences of farmers, and thinks that it won't be long until Kansas will have a membership of 100,000 if farmers will take hold of the matter as they should. He was surprised to find that the FARMER had such an extensive circulation and so many good friends among the Alliance members. He thought the sentiment generally was in favor of this paper being the official medium of the organization in the West.

J. B. French, State Secretary of the Alliance, writes us that he has issued charters to thirteen new organizations during the past week, and that McPherson County Alliance will be organized soon. The Secretaries of the new Alliances are as follows: John Baker, Wherry, Rice county; S. C. Kladey, Alden, Rice county; L. Brayton, Little River, Rice county; J. B. Harper, Circleville, Jackson county; B. O. Cooley, Denison, Jackson county; A. E. Crane (County Secretary), Mayetta, Jackson county; A. A. Disney, Richland, Shawnee county; James Witt, Winchester, Jefferson county; D. Sproul, Cedar Vale, Chautauqua county; A. H. Boone, Parsons, Labette county; C. F. Dillworth, Guelph, Sumner county; Henry Harford, Medora, Reno county; Secretary not reported, Grenola, Elk county.

Gossip About Stock.

J. H. Sanders, publisher of the *Breeder's Gazette*, is in Washington urging the Department of Agriculture to make an effort to rid foreign countries of the existing prejudice against American meats.

The Kansas City Board of Trade protests against the local inspection bill before the Missouri Legislature "as an unwarranted assault upon the vital interests of this State." A committee has been sent to Jefferson City to prevent its passage.

J. J. Malls, Manhattan, Kas., breeder of swine and Short-horn cattle, writes: "Stock all came through the winter in good shape, with ten young calves and forty fine pigs dropped at this writing and a good many more to hear from. Wheat and oats in splendid shape and sprouted nicely."

Secretary Tracy, of the United States Navy, disposed of his trotters at public sale in New York the 17th inst. at prices ranging from \$200 to \$6,000, the total sale amounting to \$59,820, an average of \$1,246 for the first day. The second day resulted equally well, making a total average for ninety-nine stal-

lions, brood mares and youngsters of \$1,141 each.

The following from the *Breeder's Gazette* was handed us to make a note of for our "Stock Gossip" column. The report is so remarkable, that instead of merely making a note of it we give it entire:

To the Gazette: In your issue of January 23 appeared the statement of M. E. Moore, of Cameron, Mo., in which he reported a yield of 527 lbs. 9 oz. of milk and 32 lbs. of butter in one week from the Holstein-Friesian cow Gerben 4th. From Mr. Moore we solicited a sample of milk of this cow, giving explicit directions how it should be taken. Our request was promptly acceded to and a sample of the milk was received February 8 which analyzed: Specific gravity, 1.0314; total solids, 13.70; fat, 5.13.

Mr. Moore reported the yield of milk on the day the sample was taken to be 63 lbs. Granting that the milk was as rich in fat as the sample received, there would be a little over 32 lbs. of pure butter fat in the day's milk, which, if all was recovered in the butter, would make fully 4 lbs. of butter containing 80 per cent. of butter fat. Mr. Moore states that the sample was taken exactly according to directions.

At first we ought to let the matter rest at this point, but believing that we should get still nearer the cow, I sent Mr. F. G. Short, a chemist of this Station, to Cameron, to secure samples. Mr. Moore had no knowledge whatever of Mr. Short's intended visit, but received him cordially and allowed him every privilege. Mr. Short took every precaution to secure correct samples of Gerben's milk, attending to the weighing himself and sealing the samples as soon as drawn. Three samples were taken: the first on February 17, at noon; the second in the evening; and the third the following morning. Mr. Short attended personally to seeing that the cow was milked dry in the morning of the day the first sample was taken.

Every condition for a large milk flow and butter yield was against the cow at this date; she had been bred a few days previous, her grain feed had been changed and reduced from what it had been during the large test reported by Mr. Moore. February 16 it had rained all day and that night had turned to zero weather; the cow was not blanketed nor given any special attention and went with the herd as usual out into a field for the water she drank. As shown by the table, she gave nearly 49 lbs. of milk in three milkings from which samples were secured. The samples taken on February 17 and 18 were received February 22 and at once analyzed, the milk being still sweet.

The following table gives the results of the analyses:

Time of milking.	Lbs. of milk.		Total solids, per cent.		Fat, per cent.		Solids not fat, per cent.		Caseine, per cent.		Ash, per cent.		Sugar by difference, per cent.		Specific gravity.
	February 17, noon.	February 17, evening.	February 18, morning.	12.69	13.06	4.91	9.05	8.21	7.5	1.01	1.038	1.038	4.99	1.038	1.038

Multiplying the milk product by the percentages of fat we get the following:

Time of milking.	Yield.	Percent fat.	Am't fat.
Noon.....	12.69 lbs.	4.91	.623 lbs.
Evening.....	11.5 lbs.	3.84	.442 lbs.
Morning.....	24.69 lbs.	3.53	.871 lbs.
Totals...	48.88 lbs.	...	1.946 lbs.

We have, then, a yield of over 1.9 lbs. of pure butter fat for a day of twenty-four hours. Granting all is recovered in the butter, at 80 per cent. pure oil to the pound it would give 2.43 pounds of butter. At the same rate when giving 527 lbs. 9 oz. the yield of butter would be 26.29 lbs. While this is less by 5.7 lbs. than the claim of Mr. Moore, I am more than willing to concede that the conditions under which the samples were taken amply account for such a discrepancy. After listening to Mr. Short's report of his examination of the milk record of the herd, kept by Mr. Moore, of the condition of the weather, and of the manner in which the cow was managed, I am free to state that I believe that the claim of 32 lbs. of butter in one week from Gerben 4th is entirely possible and probable.

W. A. HENRY,
Wisconsin Agricultural Experiment Station.

Of all the plans for destroying the curculio insects none seems to be so popular or suc-

cessful as that of giving the tree a vigorous shake every morning. Now the modern improvement of this popular plan is to have your poultry yard near enough to the plum trees, and very early in the morning when you go past the yard let the fowls go along with you, and see what an interest they will take in your shaking the curculios from the plum trees.

Patents.

The following list is reported through the official records for the week ending April 16 1889, by Higdon & Higdon, Patent Lawyers, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 St. Cloud Building, Washington, D. C. By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents.

MISSOURI.

Panel raising machine—John Green, St. Louis.
Furnace—Michael A. Foster, St. Louis.
Farm gate—Calvin M. Gitt, Stanberry.
Colander steamer—George L. Motter, Rich Hill.
Cutter bar for reapers and mowers—John I. Murray, St. Louis.
Tilting gate—Milford A. Nelson, La Monte.
Vapor burner—Charles H. Shulz, St. Joseph.
Electric alarm advance car—Harry Risenberg, St. Louis.
Cock or faucet—Frank B. Ray, Kansas City.
Indicating devices for charging furnaces—Edward Walsh, Jr., St. Louis.
Concrete pavement and floor—Preston M. Bruner, St. Louis.
Car coupling—Preston & Case, St. Louis.

KANSAS.

Lock and latch combined—John A. Campbell, Ellis.
Combination coupon ticket stamp and punch—Wilson M. Dunaway, Delphos.
Cultivator—Harrison Staggs, near Valencia.

Topeka Weather Report.

For week ending Saturday, April 20, 1889:

Date.	Thermometer.		Rainfall.
	Max.	Min.	
April 14.....	58	38	Trace
" 15.....	58	35	Trace
" 16.....	78	37	Trace
" 17.....	68	51	.31
" 18.....	66	54	.27
" 19.....	71	41	..
" 20.....	77	41	..

It is said that 90 per cent. of all the beef used in Boston comes from the West, included in which are about 100 carloads of dressed beef per week, besides the large quantities received for exportation.

For nearly half a century Ayer's Cherry Pectoral has been the most popular cough remedy in the world. The constantly increasing demand for this remedy proves it to be the best specific for colds, coughs, and all diseases of the throat and lungs.

If the horses are to be turned onto grass, they should only be allowed to be out an hour or two a day for the first few days, and then be taken up and given some dry feed. If this is not done their system may become too greatly relaxed and the animal so debilitated as to be weak and unfit for work.

Europe is all very well, but don't you think it is only fair as an American to know your own country thoroughly? Try the "American Alps" on the South Park Division of the Union Pacific in Colorado this summer. There's nothing like them in Switzerland.

The splendor of the "American Alps" are beginning to be appreciated by our people, and a visit to Switzerland for gorgeous scenery is unnecessary. The picturesque mountain resorts on the South Park Division of the Union Pacific in Colorado are absolutely unrivalled on this continent.

NEW ADVERTISEMENTS.

Appeal.....Oklahoma Surpassed.
Barnes, G. Z.....Pasture.
Cox, S.....Sweet potato plants.
Cheney Creamery Co.....Separator wanted.
Clippinger & Bro., A. B.....Latter harrow.
Chew & Co., Thos. H.....Farms wanted.
Fisher, O. D.....Stallion for sale.
Hauschild, G.....Weed-cutters.
Kline, J. B.....Bees for sale.
Kinley & Lannon.....To trade.
London Purple Co.....London purple.
McAfee, H. W.....Clydesdale stallion.
Mountz, S. S.....Sweet potato plants.
Miss Valley Route.....Railroad.
Russell & Metcalf.....Money to loan.
St. Joseph Apisary.....Bees, hives, etc.
Snyder, John C.....Turkey eggs.
Sproul, Mrs. Belle L.....Poultry.
Stites & Co.....Iron measures.
Turk, B. N.....Water grist mill.
London Needle Co.....Needle case.
Waltmire, W. W.....Short-horns.

The Home Circle.

To Correspondents.

The matter for the Home Circle is selected Wednesday of the week before the paper is printed. Manuscript received after that, almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

The Fair Young May.

BY MAY WIMMER.

Young April, in his tireless flight,
Told a secret to the breeze,
Who gleefully heard and wafted it
Far over land and seas.

The warbling birds in every tree
Gladly whisper it as they sing,
The sweet, sweet song of the summer,
That the fair young May will bring.

The plum trees standing grim and sad
Heard the whisper in the night.
Joyfully they set to work
To robe themselves in white.

The old peach tree by the garden wall
Felt her heart grow young again,
And over all her branches gray
Blushed a rosy blush as then.

The old gnarled trees by the garden wall,
With the pink, the white and the gray,
Will shower their wealth of blossoms sweet
At the feet of the fair young May.
Edna, Labette Co., Kas.

Time flows from instants, and of these each one
Should be esteemed as if it were alone;
The shortest space, which we so highly prize
When it is coming, and before our eyes,
Let it but slide into th' eternal main,
No realms, no worlds can purchase it again;
Remembrance only makes the footsteps last,
When winged time, which fixed the prints, is
past.
—Sir John Beaumont.

Oh! ask not, hope not thou too much
Of sympathy below;
Few are the hearts whence one same touch
Bids the sweet fountain flow.
—Mrs. Hemans.

Be Cheerful.

"Be always as cheerful as you can, for no one delights in a sorrowful man"—or woman, permit me to add to this favored truism. Cheerfulness is acquired by continual indulgence in the virtue; likewise the disposition of fretfulness, in cultivating the habit. This lovely world with all its beauty was made for us and our comfort, and if we will only accept it is ours to enjoy. I think too many of God's creatures are inclined to look on the dark side of life, can see more shadows than sunshine, and their countenances reveal it. It is contrary to human nature to look cheerful when we are discouraged. But how much more agreeable we would be to ourselves and associates if we would but look on the bright side of life, through the sunshine to the life beyond. We all admit that we admire a cheerful disposition, one that can banish the trivial trials of every-day life and go on their way singing, with a cheery face, making all around joyous. The malady of fretfulness, fault-finding and sorrowing is contagious, so too is cheerfulness; but the former are very dangerous, leaving disagreeable traces of the disease for generations. Cheerfulness is milder and much to be preferred, for the patient, on the slightest indication of recovery, feels no dreaded symptoms of regret or remorse. How much more we enjoy hearing a happy-faced person talking of the comfort and happiness of the world with a jolly enthusiasm, than to hear the never-ceasing complaints of a melancholy, "O-dear-me!" individual who is ever ready to magnify the petty trials into an imaginary monster. Cheerfulness is preferable, and we can not fail to appreciate and endorse the lines of the poet—

Laugh, and the world laughs with you;
Weep, and you weep alone;
This grand old earth must borrow its mirth
It has trouble enough of its own.

Sing, and the hills will answer;
Sigh, it is lost on the air;
The echoes bound to the joyful sound,
But shrink from voicing care.

There's room in the halls of pleasure
For a long and lordly train;
But one by one we must all file on
Through the narrow halls of pain.

Be glad, and your friends are many;
Be sad, and you lose them all;
There are none to decline your nectared wine,
But alone you must drink life's gall.
Rejoice, and men will seek you;
Grieve, and they turn and go;
They want full measure of all your pleasure,
But they do not want your woe!

SUNFLOWER.

Wakarusa, Shawnee Co., Kas.

HOW TO LIVE WELL.

The abundance of articles on exercise, athletics, training, etc., in contemporary literature at the present time indicates an extraordinarily widespread desire to know how to live well. This pressure of health discussion on the people has resulted in many cases in the complete overthrow of some popular theories, and has been productive of good results. People are taking more interest in their own bodies, and they are beginning to realize that the road to success is paved with the cobblestones of good health. On the other hand, the reader who eagerly devours columns on columns of advice on health matters is apt to be left high and dry on the shoals of uncertainty. It is very unsatisfactory to the seeker after a sound body to read one day that exercise is the best thing possible and that a man should eat only certain things, and the next day that exercise is wholly unnecessary and to eat what he pleases.

This dissensus of opinion on the part of health writers indicates as a rule superficiality of knowledge and a lack of experience. It indicates also that oftentimes what is good for one person is not good for another. One man inherits from the start a strong constitution which it may take years of dissipation or reckless living to undermine. This man, speaking from his own experience, will tell you that smoking is harmless, that intoxicants are a good thing, to eat what you like, and in fact to do anything and everything you please. Another man of delicate frame and perhaps inheriting the physical defects of his parents, will hold the opposite view. Now, in order to arrive at any definite data as to what is good and bad for the human body, it is obvious that the delicate man is the proper man to study. For instance, if it were desirable to ascertain the evil effects of tobacco, and the strong man should be experimented on, it might take years to produce any evil effects on him, but the delicate man would show the results immediately. It is on the same principle that a knife reasonably sharp already can be sharpened much quicker than a dull knife. So, in order to arrive at any definite results, the delicate man is a much better subject than the strong man. He is more sensitive. The conclusions arrived at in this article are derived principally from the study of delicate constitutions.

DIFFERENCE IN INDIVIDUALS.

It may be said at the start that as the organs of all men are the same and the processes by which they eat and assimilate their food and renew constantly the wear and tear of their bodies are identical, it would seem as if the same remedies would apply in every case. But this does not follow. Primatively, all men are alike. But the infinite variety of modern society, the different modes of living, produce entirely different types of individuals. While it is true in a general way that a rule which applies to one man is good for all, it frequently happens that rules have to be modified to such an extent as to lose entirely their original force. For instance, milk is a perfect food. It contains all the elements necessary to supply the demands of the body, but there are many persons who cannot drink milk to any great extent. They will tell you that it makes them bilious.

THE THREE RULES.

But the three rules of life which never vary and which hold good for every man, woman and child, are exercise, pure air and a clean skin. Herein is contained the nucleus of good health. It may be set down as a fact that there isn't one man in five hundred who knows how, or, if he does, takes care of himself. What would be thought of a carpenter who, in building a house, was so negligent that he worked with dull tools? And yet that is precisely what we are all doing. We are working with dull tools. The great trouble is that it is difficult to maintain an even balance between the mental and the physical being. If a man is a brain-worker it is the hardest thing in the world for him to take care of his body. He may realize perfectly that by walking two or three miles a day, by exercising his arms and shoulders systematically for fifteen or twenty minutes, and by keeping his skin free, he will not only be able to accomplish more and better work, but he will be happier, live longer and make himself comparatively secure against the diseases to which the feeble are so prone. But we don't do it.

We notice this tendency constantly. Men with magnificent brain structures breaking down because they neglect themselves. On the other hand, men of fine constitutions running to muscle and neglecting their brains. Occasionally we see a combination of the two and then we have a Gladstone or a Bismarck.

THE HUMAN BODY.

It may be roughly said that the human body is like a sponge. It is porous, and if you step up all the pores death follows. Thus the value of a free skin. If you put an apple alongside of a pumpkin for a short time it will absorb some of the essence of the pumpkin. This spoils the apple for eating. If you place the human body in a bad atmosphere it will absorb some of its impurities, hence the value of fresh air. That is as plain as day. Volumes have been written about fresh air, but it is all contained in the simple statement that as our blood is puri-

fied by contact with air in our lungs, it follows that if the air is not pure our blood will not be purified.

Water is full of animal matter. If you place water in a cask and let it stay long enough it will become stagnant. Captains of vessels going on a long sea voyage are obliged to have the ship's water tanks painted with whitewash or coated with charcoal inside to keep the water pure. If you fill a sponge with water and let it stand long enough it becomes "stale." This is very nearly what happens to a muscle which is not used. The blood starts out from the heart, travels through the arteries, stops at the way stations, leaves its nutritive substance which takes the place of the worn-out matter and takes in exchange the impurities back through the veins to the lungs, where, mixing with the oxygen of the air, the impurities are carried off in carbonic acid gas. You see the blood has a pretty good task to perform, and it calls on the sponge-like muscle to help it. The heart in its pump capacity impels the blood forward, and the blood gets along the best way it can and gathers up the impurities and leaves the good matter behind.

USE OF THE MUSCLES.

In order to illustrate the value of muscles, suppose you wanted to clean a sponge. You would first take the sponge and hold it under running water. Now, what would you do next? Why, you would squeeze the sponge, of course, because you would in this way clean it, not only quicker but better. Now, that is exactly what you do when you exercise a muscle.

The man who doesn't exercise is like one who will hold a sponge under running water without squeezing it, and then expect the sponge to be thoroughly cleaned.

Hold your arm out straight, then bend it until your clenched hand almost touches the chin. Look at the muscle which lies along the humerus, on the upper side of the arm between the elbow and the shoulder (the biceps) and you will see it bunch up. You have squeezed it. Now, pick up a dumb-bell as heavy as you can lift and repeat this motion. You notice that the muscle is squeezed a little harder than at first.

LIGHT AND HEAVY EXERCISE.

This is the visible difference between light and heavy exercise. A great many people contend that heavy exercise is better than light, because you can accomplish so much more in a shorter time. This, by the way, was one of Benjamin Franklin's theories, but it is wrong. The intelligent reader will immediately perceive that it isn't how hard you squeeze the muscle, but how many times. In other words, it is better to lift a one-pound dumb-bell ten times than a ten-pound dumb-bell once. Heavy exercise also has two disastrous results. It has first a tendency to make one stiff-jointed or "muscle-bound," which is a common complaint among athletes, but not so common as it used to be; and second, one is liable to strain himself. The muscles, when in good condition, should be soft and pliable when relaxed, and when contracted, should be firm. Not necessarily rocky, but hard.

WHEN AND HOW TO EXERCISE.

The first question which people ask is: "When and how shall I exercise?" In cleaning a sponge any time is the best time, but a muscle is a little different from a sponge. It has life, and its supply of blood is sometimes diminished; for instance, just after a meal, when the blood flows to the stomach to make more of its kind. The best times to exercise are in the morning before breakfast, in the afternoon, and at night an hour before retiring. The almost insurmountable difficulty about exercising is the perseverance it takes to keep it up. But habit rules the world, and if one gets into the habit of exercising at a certain time every day he will, after a time, find it fastened on him. He will also feel so much benefit from the increased circulation of the blood and from the "tone" which he gets that his daily exercise will become almost a matter of necessity. It is not the purpose of this article to discuss the different methods of exercising. They are countless. But anything that squeezes a muscle is good. A pair of two-pound dumb-bells will answer every purpose, and there are scores of books showing their uses. As a simple method of testing the effects of exercise, say for instance that you are troubled with dyspepsia. Lie down flat on the floor on your back and then rise up in a sitting posture. When you are rising up put your hand just over your stomach and you will notice that there are two small lumps there. At first they will be so small that you may not be able to detect them. You may have difficulty in lifting yourself up more than two or three times at first, but the strength will increase every day, and every day the two lumps of muscle will grow larger. Try it for a month or two and you will whistle for your dyspepsia.

Here are a few pointers:
Exercise in little or no clothing.
Have plenty of fresh air.

Study the different muscles and note what particular exercises tire particular muscles.

BATHING.

There has been a great deal written about bathing. The surface of the skin is punctured with millions of little holes called pores. The duty of these pores is to carry the waste matter off. For instance, perspiration. Now, if these pores are stopped up they are of no use, and the body has to find some other way to get rid of its impurities. Then the liver has more than it can do. Then we take a liver pill when we ought to clean out the pores instead. The housewife is very particular to keep her sleeves in good

order; after she has strained a substance through them they are washed out carefully with water, because water is the best thing known. That is the reason water is used to bathe in. But the skin is a little different from a sieve, because it is willing to help along the process itself. All it needs is a little encouragement and it will accomplish wonders. What the skin wants is rubbing. If you should quietly sit down in tub of water and as quietly get up and dry off without rubbing, your skin wouldn't be much benefited.

The water would make it a little soft, especially if it was warm. But rubbing is the great thing. Stand where the sunlight strikes a part of your body, then take a dry brush and rub it, and you will notice that countless little flakes of cuticle fly off. Every time one of these flakes is removed from the skin your body breathes a sigh of relief. An eminent German authority contends that too much bathing is a bad thing. There is much truth in this. Soap and water are good things to soften up the skin, but rubbing is what the skin wants. Every morning or every evening, or when it is most convenient, wash the body all over with water and a little ammonia, or anything which tends to make the water soft; then rub dry with a towel, and after that go over the body from top to toe with a dry brush. Try this for two weeks, and your skin will be like velvet. In conclusion let us sum up:

Get all the fresh air you can.
Exercise at least thirty minutes a day.
Keep the pores of your skin open.
These are the sign-posts on the road to good health.—Tom Masson.

Fish as Food.

The importance of fish as an article of food is hardly appreciated. It is especially beneficial for those who have great demands for nervous energy. As is well known, it has always been considered a superior brain food, chiefly on account of its phosphorus. Contrary to the popular idea, it has been shown by analysis and experiment, that it contains no more phosphorus than meat. The value of fish to the brain-worker is then urged by Sir Henry Thompson, on the ground that it "contains, in smaller proportions than meat, those materials which, taken abundantly, demand much physical labor for their complete consumption, and which, without this, produce an unhealthy condition of the body, more or less incompatible with the easy and active exercise of the functions of the brain." Thus it is seen, that although fish is less nutritious than meat, it is much more easily digested. While it is well for those who are accustomed to great physical exertion and suffer from exposure to cold, to eat heartily of meat, it is obvious that those of sedentary habits should partake of that which, affording sufficient nutriment, calls for the least expenditure of nervous force. In this respect fish is an admirable food, containing more water and less solid matter than meat. As you ascend the animal scale, nutriment increases, oysters containing less than fish, fish than fowl, and fowl less than the flesh of quadrupeds. There is a constantly increasing sale of fish. The oyster trade is \$5,000,000 yearly. There can be no doubt that it would be better for the brain and nervous system if fish oftener replaced meat as an article of food. Too stimulating and heating diet has been the cause of several diseases. Fish is one of the most easily digested of foods. A medical authority states that trout is digested in one hour and milk not till two hours. The reason for the ease with which fish is digested is the small amount of fat contained. Cod and light-colored fish are more easily assimilated into the system than the darker kinds, though not as nutritious. Broiled fish is most easily digested, and iced the least. Raw oysters are readily digested and very nutritious. Cooking sacrifices their best quality. Clam and oyster water are now being much used for invalids.

Fish is not only a very important and wholesome food, but it is also less expensive than meat. The use of fish affords one of the easiest and cheapest ways by which to have a variety. Care should be taken in fish as in other foods to buy in its season. During Lent there is a great variety of fish at reasonable prices. Halibut is a little higher than, but is still cheaper than beef-steak, and has more solid meat to a pound than steak. Salmon is possible at this season, but as it is \$1 to \$1.50 a pound, it will hardly be seen on the economist's table. Our large fish have enough nutriment to form the basis of a family dinner without meat. It should always be served with farinaceous or vegetable food, as potato, potatoes, rice, macaroni and the like. Fish will reduce the cost of table fare if wisely used and still satisfy the most vigorous appetite.
—Good Housekeeping.

Do Not Think for a Moment

that catarrh will in time wear out. The theory is false. Men try to believe it because it would be pleasant if true, but it is not, as all know. Do not let an acute attack of cold in the head remain unsubsided. It is liable to develop into catarrh. You can rid yourself of the cold and avoid all chance of catarrh by using Dr. Sage's Catarrh Remedy. If already afflicted rid yourself of this troublesome disease speedily by the same means. At all druggists.

The Young Folks.

The Old Sugar Camp.

Glad were the days when times were new,
When heavy and deep the forests grew;
And through them early winds of spring
Heralded summer in their whispering.

Wild was nature in those days of yore,
And all the garments that she wore
Seemed fresh from the mighty hand of God;
The unscathed trees, the untorn sod.

Rich indeed were field and fen,
A prairie sea, the unknown glen,
While the voiceless forest standing by
Echoed not to a human cry.

Glad were the days for those who came
To labor and build, to create and name
A country new, though toil was sore,
Heroes were they in those days of yore.

Crudely honest in speech and dress,
These children brave of the wilderness,
Building wisely in their humble way,
Knights and ladies true were they.

Then was homespun the family crest,
Full measure given, closely pressed,
All things seemed good—bore honor's stamp,
In days of the dear old sugar camp.

The bleeding trees weep sweetened tears,
Yon echoes catch the sturdy cheers
Borne from the campers here and there,
Glad benedictions in the air!

Merrily roar the great camp-fires,
And o'er these sparkling, blazing pyres
The well-worn iron kettles swing
To boil the toothsome garnering.

Thus was the camp by that limpid stream
Skirting the forests and fields between,
A cherished spot where the old camp stood,
When the maple sugar was pure and good.

O, lavish sweets, fair nature's gift,
Of thee, in later years bereft,
We mourn the loss,—we miss the stamp
Of old-time days,—The Sugar Camp.

—Good Housekeeping.

Fair flowers their perfume most potent distill,
And touch all my senses with ecstasy's thrill;
And the love that bestowed them, though
blossoms may die,
Like a vision, in memory lingers for aye.

—Emily Thornton Charles.

How beautiful the night! the balmy sigh
Which vernal zephyrs breathe in evening's
ear
Were discord to the speaking solitude
That wraps this moveless scene. —Shelley.

Within the brain's most secret cells
A certain lord chief justice dwells,
Of sov'reign power, whom one and all
With common voice we "Reason" call.

—Churchill.

SIX WAR SHIPS LOST IN A STORM.

[We thought our young readers would be pleased to read the following graphic sketch of a storm which carried away six ships of war and dashed some of them to pieces on coral reefs.]

The little group on the Samoa or Navigator Islands which a few months ago attracted the attention of the civilized world by a fierce civil combat between the two native factions and the consequent possibility of serious complications between the great powers of the United States and Germany, has been visited by a disaster more appalling than all the wars ever waged there. In attempting to effect a solution of the Samoan difficulty and to protect their respective interests on the islands the United States and Germany have lost nearly 150 lives and \$3,000,000 worth of property.

The most violent and destructive hurricane ever known in the South Pacific passed over the island on the 16th and 17th of March, and as a result the fleet of six warships and ten other vessels were ground to atoms on the coral reefs in the harbor or thrown on the beach in front of the little city of Apia, and 143 officers and men of the American and German navies sleep forever under the reefs or lie buried in unmarked graves thousands of miles from their native lands.

The United States frigate Trenton, the flag-ship of the Pacific squadron, which arrived here from Panama March 11, lies within a stone's throw of the American consulate, a total wreck. The great hull of the magnificent vessel which steamed into the harbor a few weeks ago rests on the bottom and is fast going to pieces. The United States steamer Vandalla, which arrived from San Francisco February 23, is buried out of sight between the Trenton and the shore. Her shattered foremast and smoke-stack rise from the water to mark the spot where the gallant vessel struck and lay for twelve hours before an

AWFUL TORRENT OF WATER swept four officers and thirty-nine men from her decks and rigging. Her commander, Captain C. M. Schoonmaker, was among the first who perished in the waves. The other officers who met their death were Paymaster Frank H. Arms, Lieutenant Frank Sutton, of the Marine Corps, and Pay Clerk John Roach.

The United States steamer Nipsic lay for several days alongside the Vandalla with her bow high on the beach and within five feet of the water's edge. The vessel, though

badly damaged, was hauled off a few days after the storm and is the only war ship afloat in the harbor. Several of the officers and crew are living aboard. All of the Nipsic's officers are safe, but she lost five men by the swamping of a boat and two others who jumped overboard were also drowned. The three American men-of-war were swept ashore almost at the same point.

The force of the storm was never equaled in this part of the world before. The barometer had been falling steadily for several days previous to the storm, and the wind commenced to blow Friday afternoon, March 15, and continued until Sunday morning. Rain fell in torrents during the whole time, and great clouds of sand swept over the town. Hundreds of people stood on the beach and watched the awful spectacle in the harbor. The vessels all had a full head of steam on and three or four anchors out; yards and topmasts were down and every precaution was taken to insure the safety of the ships, but the wind constantly shifted from northeast to northwest and its force was so great that the vessels dragged their anchors all over the harbor and drifted from one side of the bay to the other and came into collision a dozen times. Tremendous seas broke over the decks and torrents of water rushed down the hatchways and put out the fires. There was great confusion among the men on several of the vessels early Saturday morning, but the officers did noble work and the men became orderly and attended to their duties bravely in the face of danger. Persons on the shore were powerless to render assistance to the ships. Hundreds ran to the water's edge and stood in the blinding storm watching the great vessels pitch about on the waves or drift on to total destruction against the reefs.

The sea broke upon the reef with a rearing sound and washed far upon the beach, carrying with it great quantities of wreckage. Watchers on the shore were submerged time after time, and many were injured by floating wreckage. Great clouds of sand filled the air and cut the face and body like a knife. Every one was drenched with rain, but brave men stood shivering in the storm prepared to render whatever assistance might be possible. Natives waded far out into the surf where a white man could not live, and many a life was saved through their efforts. Americans and Germans were treated alike. No thought was given to the state of war existing between the Germans and themselves. Men who fought the Germans at Vellele a few months before, now battled with the waves and risked their own lives to save their enemies from a watery grave. The storm raged furiously for nearly two days, and when the wind finally abated

THE SCENE OF DESTRUCTION.

was awful. On shore houses were unroofed and blown down and trees and fences were thrown across streets so that the passage was almost blocked. Out of seventeen vessels which were moored in the harbor, only two small schooners remained afloat, and these were badly damaged. Survivors of the disaster seemed dazed. They had seen friends and comrades swept away from their grasp and go down to death, and had expected to follow them as every wave broke over the ill-fated vessels. The long exposure had rendered them weak and exhausted. Very few had tasted food for thirty-six hours. Many had clung to the rigging with out a particle of clothing, and all bore marks of terrible suffering. The houses of Apia were thrown open, and both native and foreign residents did all in their power to accommodate the shipwrecked sailors.

Apia harbor, where the frightful disaster occurred, is a little semi-circular bay situated on the northern side of the island of Upalu. The distance across to the entrance to the bay is about three miles. A coral reef, most of which is visible at low water, extends in front of the harbor, but is broken for a distance of three-quarters of a mile about half way between Matafua Point on the east and Mullnum Point on the west. This break in the reef forms a gateway for the ships to enter the harbor. The space within this reef where ships can lie at anchor is very small, as there is a shoal of large dimensions in the eastern part of the bay, and the western portion is obstructed by another coral reef which is located from 200 to 400 yards off the shore, and extends almost from the western extremity of the bay to a point directly in front of the American consulate, which is situated near the middle of the crescent-shaped town.

It was on this inner reef that most of the vessels were wrecked, as the wind blew into the harbor from the open sea and forced them back against it. The water in the open space between the outer reef on the north and the inner reef and shoals on the west, south and east, is very deep, but the space is not capable of accommodating with safety the large number of vessels which were lying in the harbor when the storm commenced. There is no holding ground at the bottom of the bay, and it has been no uncommon thing for vessels to drag their anchors whenever a stiff breeze would spring up. Another great disadvantage which the harbor possesses is the rapid currents which shoot about in several directions, the velocity of which was greatly increased by the immense volume of water emptying into the bay from several rivers. The principal one of these currents rushed along the shore past a point where the American vessels struck. A hundred yards further west it was met by a roaring torrent of water pouring out of the mouth of the Valsigano river, in consequence of which a whirlpool was formed at the mouth of the river, and a dozen men who were tossed overboard from the Vandalla were swept down to this point, only to

be whirled round in the water for a moment and then be forced out in the bay.

The men-of-war, which were anchored in the harbor, were necessarily very close together. The vessels nearest the shore were the Eber and Nipsic. The Eber was directly in front of the American consulate, about a quarter of a mile from shore, and the Nipsic was about 200 yards east of the Eber. The Adler was just ahead of the Nipsic, and the Olga and Callopo were ahead of the Eber. The Vandalla was beyond the Callopo, a mile off shore. The Trenton was the last of the war ships to arrive here, and being much larger than any other men-of-war in the bay, there was no room for her near shore, so she was obliged to drop anchor beyond the Vandalla, just within the outer coral reef. The sailing craft were in shallow water west of the men-of-war, the Trenton and Vandalla had the most dangerous berths in the harbor, while the position of the Nipsic was considered safe.

COMMENCEMENT OF THE STORM.

For a few days preceding the hurricane the weather was cloudy and the barometer had been steadily falling, but no one anticipated the storm which commenced to set in Friday afternoon, March 15. By 11 o'clock at night the wind had increased to a gale, and nearly all the war ships had their engines working to relieve the strain upon the anchors. The crews on most of the sailing vessels threw out extra anchors and then went ashore. Rain commenced to fall at midnight, and the wind increased in fury. Great waves were rolling in from the open ocean, and the pitching of the vessels was fearful. Every man was kept at work.

The Eber commenced to drag her anchors at midnight, and an hour later the Vandalla was also dragging. However, by using full steam power, they succeeded in keeping well off the reef and away from the other vessels. The wind blew stronger and stronger, and the rain fell in torrents. By 3 o'clock the situation had become alarming, and nearly every vessel in the harbor was dragging and there was imminent danger of collision. A panic commenced to break out among the men on several of the vessels, and they were kept at their posts with the greatest difficulty. On the shore the howling of the wind among trees and the houses and the crash of falling roofs had aroused many persons from their beds, and figures were seen groping about the street looking for some spot of shelter from the tempest.

The tide was coming in rapidly and the waves were washing all over the street a hundred feet above the usual high-water mark. Spray was thrown high in the air and beat into the windows of the houses nearest the shore. Rain fell like a sheet, and men and women who were wandering about in the storm shielded their faces with small pieces of board or any other article that could be used as protection against the wind and sand. The natives seemed to realize more than any one else that the storm would result in awful destruction. People gathered in little groups and peered out into the darkness across the sea of foaming waters.

Through the blackness of the night could be seen the lights of the men-of-war, and even above the rushing and roaring of the waves the shouting of the officers and men on board came faintly across the water and struck terror to the hearts of all who listened. It could be seen that

THE VESSELS WERE DRAGGING.

as the lights were moving slowly in different directions and apparently crossing and recrossing each other. Every moment it seemed as though two or more of the great war ships were about to come together, and the watchers on the beach waited in breathless anxiety to hear the crash of the collision and see the vessels go down to destruction. A little after 5 o'clock the first rays of dawn broke upon the scene and revealed a spectacle not often witnessed. The position of the vessels had entirely changed; the wind which was blowing from the northeast had swept them from their former moorings, and they were all bearing down in the direction of the reef. Black smoke was pouring from their funnels, showing that desperate efforts were being made to keep them up against the wind. The decks were swarming with men clinging to the masts or any other object where a hold could be obtained. The hulls of the war ships were tossing about like corks. One moment the vessels seemed to stand almost upon their beam ends and the next instant the sterns would raise out of water and expose to view the rudders and rapidly-revolving propellers. Then the huge prows would be lifted high in the air, only to plunge into the next wave and deluge the ships with a torrent of water.

Several small sailing vessels had gone ashore in the western part of the bay. The Trenton and the Vandalla being further out from the shore than the other ships, were almost obscured by the blinding mist. The vessels most plainly visible were the Eber, Adler and Nipsic. They were very close together and only a few yards off from the reef. The little gunboat Eber was making a desperate struggle for life, but every moment she was being drawn nearer and nearer the reef. Her doom was certain. Suddenly she shot forward as if making the last struggle to escape destruction. The current, however, bore her off to the right and her prow struck the port quarter of the

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Nipsic. The shock carried away several feet of the Nipsic's rail and one boat. The Eber then fell back and fouled with the Olga, but neither vessel sustained much damage by the collision. The two collisions, however, had checked the Eber's progress, and she seemed unable to make any further effort to save herself. She swung around, the broadside to the wind, and drifted slowly toward the reef. A great wave rolled in toward the shore, and the Eber was lifted high on its crest and carried broadside on the reef. She came down with awful force, and in an instant there was not a vestige of her to be seen. She struck fairly upon her bottom, rolled over toward the open sea, and disappeared from view.

Every timber in the gunboat must have been shattered, and half the poor wretches aboard of her crushed to death before they felt the waters closing above their heads. Hundreds of people were on the beach by this time, and the work of destruction had occurred in full view of them all. They stood for a moment appalled by the awful scene, and then a cry of horror arose from the lips of every man who had seen nearly a hundred of his fellow-creatures perish in an instant. Then, with one accord, they all rushed to the water's edge nearest the point where the Eber had foundered.

(To be continued.)

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A farmer living in Wallace county writes: "Farmers here are getting ready to put in large crops of corn. Small grains are looking fine all over the county. I have been here two years and like the country very much."

The March report of the Department of Agriculture speaks of the seven years' crops preceding 1888 as a series of under-average crops and shows that the average per acre of wheat and corn in 1888 is considerably larger than the average for the seven preceding years.

A correspondent from Grant county says they had more rain there a few days ago, within a few hours, than has fallen at any one time during a year or more past. Ground, except sod, is too wet to work. Before the rain, wheat was showing signs of drought. The same correspondent says that the rain was quite general in the county, and that from two and one-half to three inches of water fell.

In reporting the value of live stock in this country, the Agricultural Department gives an increase of upward of \$36,000,000, in horses this year above that of last year. Milch cows have decreased in value to the extent of \$25,000; other classes of cattle have decreased to the extent of \$14,000,000, while the value of sheep has increased nearly a million and a half dollars, and swine more than \$70,000,000.

A recent dispatch from St. Paul, Minn., says that the dry spell which was reported in that region has been ended by an extended rain. The *Pioneer Press* publishes two hundred and thirty detailed reports, representing all the wheat stations on the Manitoba railway, and covering about half the wheat produced in Minnesota and Dakota. From these reports it seems that one hundred and ninety stations report good to excellent condition of the ground, thirty consider it fair, while only ten report it not good. The percentage of crop planted is equal to or above last year, and the acreage will also exceed that of last year, only thirteen stations reporting any decrease, while one hundred and two have increased the acreage.

THE ADAMSON PROCESS OF SUGAR-MAKING.

Some weeks ago we gave a description of the Adamson process—roasting the cane before extracting the juice. Our article was forwarded by a reader to a distinguished chemist, and his opinion was asked as to the merits of this new way of preparing cane for the sugar factory. A copy of the chemist's reply was forwarded to this office for our perusal, and while we are not authorized to publish it, we take the liberty of calling attention to some chemical facts alluded to in the letter:

Roasting the cane would render the substance of it softer, it would rupture the cells by the expansion of the liquid which they contain and produce a general effect which would be comparable to that secured by using a first-class shredding machine as is done on so many plantations in the South. It is estimated in the South that the gain in juice by using a shredder is fully 5 per cent., and in using a mill for expressing sorghum juice, fully as great a gain would be experienced by having the cane previously roasted.

Roasting would produce a very fine defecation of the juices. It would coagulate a large part of the albuminous matter, break up the tissues of the cane, and form a natural filter through which the juices would pass in a very pure state when subjected to subsequent pressure. Freezing has precisely the same effect, and it has been noticed in expressing juice from cane which had been frozen, that the juice is remarkably pure and easily secured.

Another advantage in this method of roasting would be in burning the waste from the cane and leaving it comparatively clean. The leaves and other matters adhering to the cane could be perfectly removed and doubtless all of the gum which is attached to the outside of the cane would be destroyed. But another fact appears at this point, suggesting whether, after all, it would be practicable, viewed from a commercial standpoint, to conduct a large factory on this plan. Heat radiates through cane juices slowly. A screen of cane stalks is perfect protection against a very hot fire. Would it be profitable to build a furnace large enough to roast 200 tons of cane in twenty-four hours? If not, does that prove that it would be impracticable on a smaller scale?

After reading the chemist's letter and considering its suggestions we see only one point of difficulty in the way of the success of the Adamson process, and that is the "enormous expenditure of heat energy necessary to roast the cane through and through." The efficacy of roasting the cane is conceded; the serious question left is—can it be applied successfully in the working of large quantities of cane? That is to be tested this summer and fall.

Wire Instead of Twine.

The McCormick self-binder is being provided with an attachment for using wire instead of twine in case the farmer desires to do so. The *Quincy Whig* of the 14th inst. contains a description of the contrivance thus: "This improvement weighs five pounds. It can be applied by any farmer in a moment's time and a McCormick twine-binder can be changed to a wire-binder. All there is of this device is a wire-twister, which is supplied in place of the knotter now used on the McCormick. In looking at the machine even an expert could not detect any change, excepting that two spools of wire had taken the place of the ball of twine."

The *Whig* concludes a long article on the subject by saying: "This inter-

changeable machine places the farmer in an absolutely independent position. Iron, from which the binding wire is made, is produced at home and cannot be cornered. In a few months the wire mills of the country could make enough wire to bind every bundle of wheat in this country, and not a single pound of twine need be used. Should the prices of twine decline, as they naturally would, when the demand was cut off, and the farmer again wish to use twine, he can change his binder in one minute from wire to twine. In other words this simple device gives him complete and absolute mastery of the situation. In coming harvests he can reduce the demand for twine more than one-half and still be in a position to use either wire or twine at will. This simple little device will certainly exercise a marked influence in the contest which the farmers are now waging against the twine trust. It is an inexpensive weapon with which the farmer can control both the twine and the wire markets. It will prove more deadly to the twine trusts than any resolutions of farmers' alliances, however strong, or any legislative enactment, however carefully guarded."

Wheat and Fruit.

The St. Louis *Republic* last week published a very interesting report of the condition of fruit in all parts of the country. Nearly every State and Territory are included. The report consists of a great many short letters from persons in the country reported. The fruit review relates to the first week in the present month. The indications then were very good, unusually so as to peaches, the buds then being alive in every State, and the season being so far advanced that a crop is assured in the West and South, and although too early to safely predict a full yield in the East, a good crop is expected at most points there. It may be said advisedly that unless the growers in the Southwest, or those having access to Western markets, remove three-fourths of the fruit from the trees, the heavy yield will prove more of a misfortune than a benefit, since the fruit if permitted to remain on the trees will be small and inferior in all cases and only the express and transportation companies will derive any benefit from the crop. The apple crop will be much smaller than that of last year, it being the off year for a crop at many of the big shipping points, notably western New York, a section that can flood every market in the country when a full crop is gathered. The strawberry crop is hardly up to the average, yet much larger than that of 1888, which was the lightest in many years. The pear crop will average light through its great enemy, the "blight." The grape crop in the West and South has been favored with such a mild winter that but little injury has been inflicted, and, though late frosts are not yet all gone, nearly double the yield of last year is looked for. In Ohio and the great grape-growing regions in New York and Pennsylvania a good crop is anticipated. The general crop of other small fruits will not be large, being at many points rather neglected.

The wheat report represents 248 counties—60 in Missouri, 49 in Illinois, 48 in Kansas, 40 in Indiana, 33 in Kentucky and 18 in Michigan. From the summary we take the following:

"The is an improved condition in all of these, each State being taken as a whole, Michigan being the lowest, 107 per cent. of last year's condition, with the greatest improvement in Kansas, 158 per cent. of last year's condition, the mild winter, absence of late freezing and late frosts, few bugs, etc., be-

ing accountable for the generally fine stand in these States. There is a decreased average in all the States except Kansas, which averages 171 per cent. of last year's acreage (probably too high, but sufficient to indicate a much greater breadth of winter wheat sowing the last year), and Kentucky, which has the same breadth as last year. Missouri is 90 per cent.; Illinois, 89 per cent.; Indiana, 98½ per cent.; Michigan, 89 per cent. The wheat is reported strong, vigorous and of good color everywhere, except in Michigan, where damage was wrought by alternate freezing and thawing. To summarize, therefore, the average condition of the six States compared with last year this time is 125½ per cent., the average acreage 106½ per cent., indicating a tremendous yield of winter wheat this year, barring untoward accidents."

Last Week's Weather.

The Agricultural Department, condensing weather conditions for the week ending Friday, April 19th, inst., says the weather was generally favorable for growing crops in all sections. The crop conditions were improved throughout the cotton region by the abundant rains in that section where the reports indicate that the cotton is all planted. Drought conditions were also succeeded by rains in the Ohio valley where the crops are reported as greatly improved, but more rain is needed in Kentucky, Ohio and Indiana. Generally throughout the winter and spring wheat states warm weather with excessive sunshine and timely rains improved the condition of wheat, grass and oats which are reported as growing rapidly. Ploughing and seeding are nearly completed in the extreme northern portion of Minnesota. Excessive rains in southeast Kansas were doubtless unfavorable to corn and some damage from hail is reported in Tennessee. The fruit crop in all sections was improved and is generally in fine condition. The growing season has opened favorably in New England and New York where grain, grass and other crops were favorably affected but more rain is needed in this section. The seasonal rains falling continues in excess on the Atlantic coast south of New York and from Texas northward to the Missouri valley. The seasonal deficiency in rainfall in the states of the Mississippi has been generally reduced by recent rains but there is large deficiency in moisture in the central Ohio valley, where the rain for the season has been less than one half of the usual amount. Over the greater portion of the cotton region about seventy per cent. of the seasonal rainfall has occurred, while in Texas and the extreme eastern portion there has been about twenty-five per cent. more rain than usual.

From the last report of the Department of Agriculture at Washington, it appears that the number of horses in the United States on the beginning of this year was 13,633,294, an increase over 1888 of 490,358. The number of mules is put at 2,257,574, increase 65,847; of milch cows the number is given at 15,236,625, increase 442,241; oxen and other cattle 35,032,417, increase 654,054; sheep are put at 42,599,079, a decrease of 495,676; swine are set down at 50,301,592, increase 5,955,067. It appears that the only class of animals which are less in number is sheep, and that the decrease amounts to nearly half a million. It is very much to be hoped that from this time forward the number of sheep in this country will increase, for in fact they are the best and most profitable stock, all things considered, which are raised by the American farmer.

Mr. O. B. Jennings, Grover, Colorado, inventor of a process of making sugar referred to in these columns a few weeks ago, called at this office a few days ago and explained his method fully. Briefly it is the diffusion process, adding lime to the cane chips before diffusion. Mr. Jennings is arranging for work in Kansas. He expects soon to have cuts of his machinery ready for advertising in the KANSAS FARMER. He wants to enlist the sympathy and co-operation of all friends of the Kansas sugar industry. The KANSAS FARMER wishes him all possible success.

A Stevens county correspondent says they have plenty of rain in that county. A large area of land has been prepared this spring for corn and other crops. Oats was all sowed some time ago. The young plants are now looking well, some corn has already been planted, castor beans also, and garden vegetables in almost endless variety. Wheat looks well in that region, and this particular correspondent is of opinion that thirty or forty times more ground is now in wheat in that vicinity than there was last year. Rye is making good pasture and has been during three weeks or more past. A good deal of Alfalfa seed was sown, and it looks extra well; some red clover is growing, and it is reported in good condition. Kaffir corn, rice corn, sorghum and millet are being planted extensively. The Stevens county people expect a large immigration this year.

Next Tuesday in New York city will be a remarkable day. In commemoration of General Washington's installation as President of the United States a hundred years before in that city, the day will be observed with great ceremony and rejoicing. Everybody wants to see the parade; convenient places for observation are renting at fabulous prices. Despite the efforts of those in charge of the affair, speculators have secured tickets to the main grand stand in bunches of from twenty-five to two hundred. The prevailing price is from \$8 to \$10 per ticket, but the holders are waiting until the crowd is here, when they expect to sell tickets at \$20 each. A large window opposite the Brunswick hotel was sold for the first day parade for \$500. In half an hour the purchaser had an offer of \$1,000 for it. A gentleman who hires a building on Broadway just above Fourteenth street for \$6,000, rented his windows facing Broadway for enough to pay his rent for the whole year.

During the excitement of the campaign last summer, a great deal was said about combinations known as trusts, and it was agreed quite generally by persons who were opposed to the protective tariff policy of our government that the tariff is responsible for the large number of trusts in this country, upon the theory that with free trade there would be no trusts, because protection by law protects business men in combining to regulate prices. It appears, however, that in England, which is a free trade country, the trust idea was developed practically some time before it was in this country, and that the combinations there are more powerful if possible than they are here. Take the coal trust, for example. The proposed capital of the coal trust now in process of formation in England is put at 100,000,000 pounds sterling, or what would be in our money \$484,000,000. It is said that the money is ready to be put down as soon as the details of the scheme are perfected. Every coal mine in the country is to be bought up, prices regulated, and the proceeds of sales pooled. The details of the proposed trust show that it will rival in some re-

spects the American Standard Oil monopoly. This is only one of a large number of instances which might be cited, showing that combinations of men and money are made independently of law.

LABOR COMMISSIONER'S REPORT.

From copious synopses of the various chapters of the fourth annual report of the Kansas Bureau of Labor Statistics, recently published by Commissioner Betton, we take some interesting facts:

Kansas had 93 mills that ground during the year ending June 30, 1888, over 40,000 bushels of grain each. One of these mills ground 1,200,000 bushels. The average price per bushel paid for this grain was 73½ cents. We quote the following paragraph: "One hundred and eighty mills report producing 533,111,586 pounds of flour, etc., manufactured, not including offal, or an average of 2,961,731 pounds. Reduce this product to barrels, and it gives for each mill 14,808 barrels as the product for the year, or about 60½ barrels for each day of 12 hours run, (the average days of 12 hours run being 245.) By referring to the number of bushels of grain ground by the 181 mills reporting, it will be seen that they averaged 73,641 bushels, or 298 bushels for each of the 245 days. This 298 bushels presumably produced the 60½ barrels, showing the average bushels per barrel to have been about 4 4-15, or, counting 60 pounds to the bushel, 4 bushels and 56 pounds."

That carpenters, stone-cutters, plasterers, and brick and stone masons have been reasonably busy, a glance through our wage tables will demonstrate, and that the year just ended has been the most prosperous to the Kansas craftsman of any since the organization of the Bureau, our reports will verify.

Five manual training schools have reported to the Bureau from Kansas. The showing is highly satisfactory. The Agricultural college at Manhattan gives the most decidedly favorable advance in producing mechanics, as well as farmers. The plans for carrying on manual training schools, as used by the largest schools in the United States, are given quite fully.

Concerning the growth of Kansas manufactures, the report says: "In our first report, from the returns received, we estimated the capital invested in this class of industries (including flouring mills) at \$19,000,000; in our second report at \$22,000,000; in our third report at \$23,000,500; and the returns actually received this year show an aggregate of capital of \$34,085,535, or \$7,585,535 greater than the estimate of last year, which was based upon the assumption that the reports received represented about 90 per cent. of the whole. Accepting this 90 per cent. basis as a guide for this year, it places our private manufacturing capital at, in round numbers, \$37,500,000, against \$19,000,000 in 1885, a gain of nearly 100 per cent."

Missouri Crop Report.

The crop report sent out by the Missouri State Board of Agriculture for April 1, inst. shows that the winter was remarkably mild and free of storms. The mercury dropped below zero but two or three times during the winter in any part of the State. Stock was continued on pasture until about January 1, and those who have blue grass pastures were able to graze them almost continuously throughout the season.

During the season for plowing for winter grain the weather was dry in the northern part of the State, and in some sections continued so until late in the fall. In consequence the plowing was delayed, or when done, the land turned over dry and cloddy, and the conditions for seeding were not good. Germination was slow and uneven, and the growth seemed generally weak. These facts, coupled with almost an entire absence of winter protection by snow, caused many to fear that the plants would be badly frozen out. There does not seem, however, to have been much injury done, and as the growing weather of spring comes on the condition of the wheat seems to be constantly improving. In a few counties in the northern part of the State too little rain for the good of the wheat is reported.

In the southern section of the State the climatic conditions have been favorable for wheat from the time of plowing the ground until this date, and a frequent statement of

correspondents is, "I have never seen a better prospect for wheat." The prevalence of chinch bugs last season, however, prevented many from sowing as large an area as they otherwise would. The dry weather in the northern part of the State had a similar effect, and the result is a considerable reduction in the area sown.

The spring is from ten days to two weeks earlier than usual in respect to vegetation, and farm work is, in general, up with the season, though in the southern part of the State continued rains have interfered somewhat.

In estimating the construction of new railroad mileage this year, it is calculated that in twelve of the Eastern States the new mileage will be about 2,375 miles, that of the Western States is put at 6,675 miles, the Central-Northern States are given 2,431 miles, the Northwestern States 8,172 miles, the Southwestern States 6,743 miles, the States on the Pacific coast are rated at 2,705 miles. It appears from these figures that the proposed construction of railroads in the United States this year will, if no accident occurs, exceed by several thousand miles the construction of any former year.

A bill was introduced into the Illinois Legislature some time ago proposing to establish a fixed rate for the valuation of property in the State for the purpose of taxation. The rule agreed upon is one-third the real value, the members believing that a one-third valuation will come more nearly to an equal basis for assessment than any other, and this conclusion, it seems, was reached after mature consideration. That is supposed to be about the basis in Kansas, and yet it frequently happens that property is valued at one-half or more of its value, and in other cases, 25 per cent. and even less. There is no regular standard in practice here though the constitution and the law contemplate assessment of property at its real value.

From a recent issue of the *Farming World*, published at Edinburgh, Scotland, it appears that sheep which are infected with foot-and-mouth disease have been imported into that country from Germany. To make matters worse, the *World* says, diseased animals have been landed at four different ports, London, Grimsby, Hull, and West Hartlepool. If the infection should spread from all these quarters there will be great danger of it speedily spreading all over Great Britain. Our Scottish contemporary says: "The fact that this ruinous disease has again reached our shores from a foreign country has naturally aroused much comment. The regrettable occurrence has been the subject of several questions in the House of Commons, and the replies have been to the effect that the ships which brought in the diseased sheep have been thoroughly cleansed and disinfected, and that Germany has been added to the list of prohibited countries."

The New York Times recently collected some statistics concerning the occupation of members of the national legislatures of different countries. It appears that in the House of Commons in Great Britain, there are 670 members, of whom one-fourth are farmers, another one-fourth are manufacturers, one-fifth of the number are rated as business men, and 107, less than one-sixth, rank as professional men, lawyers chiefly. The Chamber of Deputies in France contains 580 members; of these, 270, or nearly one-half, are lawyers, 95 of them are office-holders of different kinds, manufacturers are represented by 81 of the members, farmers have 72 representatives, and tradesmen 62. The Congress of the United

States contains 325 members in the lower House; about four-fifths of them, or, to be more precise, 264 are professional men, 220 of these being lawyers, while agriculture and commerce, each, have a trifle over 20. In the Senate the preponderance of lawyers is even more marked than in the House.

A suit was brought some time ago in one of the courts of New York city to compel the State Comptroller to issue revenue bonds of the city of New York in a large amount, to pay a balance of State tax levied on real estate for the year 1887. The city refused to pay the money because it represents a tax on a large amount of increased valuation of property. The witnesses in the case gave some curious testimony relating to the method of assessment in that State. One of the witnesses who is a member of the State Board of Assessors, said that no definite information was obtained as to any grade of city property. The assessors divided the property of the city into several classes, such as hotel property, office buildings, banks, flats, tenement houses, store property, corporation estates and theatrical establishments. He said a typical and specific building was assessed in each case, and the assessed value was obtained from the tax commissioners' office, after which the actual value was discovered if possible, and the assessment made on the basis so discovered. It seems that assessment methods in New York are quite as indefinite and unsatisfactory as they are in Kansas. It is strange that in a matter which has been before the people ever since government began is still in such a chaotic condition. We talk about our systems of taxation, and yet there is absolutely no system about it; it is all loose and disjointed, most of it mere guess work, except that the percentage which the tax-payer is called upon to meet is always certain, neither going up nor down, nor being made shorter nor longer.

One of the important matters demanding attention by the next Congress is the code of rules by which business is transacted in the House of Representatives. There have been so many rules adopted curtailing the privileges of members that it has now come to this, that one member, and that means every member, has it within his power at any time to absolutely prevent the transaction of business for an indefinite length of time. The effect of such a rule is to make one man a tyrant and to encourage every member in what is commonly known as filibustering, so that by an agreement between any two members or any small number, they may, by interposing dilatory measures, prevent the majority from proceeding in the regular way, and this they may do for weeks at their pleasure. It happened two or three times during the last session that legislation was wholly stopped for several days at a time—in one instance more than a week—just because one obstinate member insisted on having his own way. That kind of practice must be stopped. Members of Congress are elected to attend to the people's business, not to obstruct it. Rules of proceeding are framed for the purpose of assisting in the orderly transaction of public business. The constitution of the United States provides that each house may make its own rules; that does not mean that the houses are to adopt rules which will prevent the proper and orderly discharge of official duties. Congress ought to take hold of this matter bodily and adopt a code of rules in harmony with the democratic principle of our government.

Horticulture.

PRACTICAL GRAPE-GROWING.

A paper by J. G. Kinder, read at the meeting of the Missouri Horticultural Society, at Nevada, Mo., and printed in *Rural World*.

It is with some hesitation I undertake to give opinions on this subject, when aware that before me are veterans in grape-growing who can give opinions backed up by a much greater experience and knowledge of the business. But, if by giving wrong opinions I thereby call attention to the matter and call out a correction, my effort will not be an injury.

In heading my article "Practical Grape-Growing," I had an object, because we receive so much instruction nowadays that if taken literally is not practical, so much so that I think much of it acts more as a discouragement to horticulture than a help. Men argue that if it requires so very much attention and labor to accomplish certain results, they do not care to attempt it. Who has not seen the stereotyped illustrations in catalogues and in books on fruit-growing, etc., of how to train the vine? Have you not noticed how nicely the vine forked just the right distance from the ground, one side branch extending just so far to the right, the other to the left, how at equal distance along these branches a lateral containing just three bunches, all just the same size, and extending just far enough to be tied to the next slat of the trellis? I ask who has not seen just such a picture; and yet who ever saw a vineyard trained that way? Not one, but if one chose to train a vine that way it could be accomplished in great measure, but to get paid for it, grapes would have to sell for 25 cents per pound. I consider all such instruction as unpractical, and what hurts even worse, is unprofitable, also, it is unnecessary. Hence, let us seek for practical instruction in grape growing, which means how to obtain the very best possible results from the care and labor bestowed.

The first thing to be taken into consideration by the grape-grower is

THE SELECTION OF VARIETIES.

The time has come when the Concord cannot be made almost the exclusive variety. While I do not wish to pluck one leaf from the crown of laurels so justly won by this noble grape, a grape which has responded alike to the care of the vineyardist, and in a measure to the neglect of the average planter; still facts are stubborn things. The people demand a better grape. I have watched the market for years, and there is no doubt but on an average the Delaware grape will sell for double on the market what the Concord will. Now, although the Concord will yield much more than the Delaware, still when we take into consideration cost of shipping, packing, commission, etc., it is a question if the Delaware is not the more profitable grape to raise for market. I mention these two grapes because of their ripening so near the same time. But we, here in southwest Missouri, need to look still farther into this matter. We have grapes equal in quality and from ten to twenty days earlier than Concord, which should receive our special attention, because we can get them into a market that is not over supplied, as we generally find it later on. Then again we have varieties, many of them very much superior in quality to the Concord, which ripen from two to five weeks later.

The practical grape-grower will look well into this branch of the subject if he would grow grapes at a profit.

There is one matter I wish to call your attention to, and it is a matter, if looked at seriously, that becomes

A HUMILIATION.

At this time, and for weeks past, a visit to any of our grocers in the city, would find grapes for sale, grown hundreds of miles north of Ohio and New York, Concord grapes for which our people pay 8 to 10 cents per pound. Now I wish to assert one thing and I do so without fear of successful contradiction, and yet it is contrary to the general impression held in this community, and that is, that there is not one single grape mentioned in any catalogue in the United States that cannot be grown to as great perfection as regards bunch and berry, right here in Vernon Co., Missouri, as in any county in the State of New York, or any other State, and as regards quality of the fruit, it is well known that any of our Southern-grown fruit is richer and better than that grown where they have not so much warm sunshine as we are blessed with in this latitude. This is a carrying of coals to Newcastle with a vengeance, particularly when we have most excellent varieties of grapes that would ripen nicely to supply the market at this late season, which our Northern growers cannot raise at all because of not having a long enough season to ripen them. Here is one immense, unoccupied field that should receive the close attention of every fruit grower who desires to develop the resources of our State in this particular branch of horticulture.

TWO IMPORTANT POINTS.

In planting vines I would particularly impress upon your minds two points that I consider vital. Land is cheap, give vines plenty of room, twelve feet apart each way is not far from the right distance. This will give room for a free circulation of air and will be found better after vines have attained age. Another vital point is to plant good, strong, 2-year-old vines and plant them deeply. This is essential to get the main body of the roots low enough for permanent moisture, also low enough to be out of the way of the passing cultivator. To plant deeply of course it is necessary to plow deeply in preparing the ground for the young vines.

HOW TO CULTIVATE.

In cultivating vines, I don't know as I could give any better instruction than to insist that you should cultivate often enough to keep weeds in subjection. I look on weeds as a sort of a dispensation of Providence to cure a man of laziness. Just keep the weeds down in the vineyard by stirring the ground; the vines will take care of themselves, if you take care of the weeds.

The rule is just as essential to vines at ten years old as at one year old.

HOW TO TRAIN VINES.

It is hard to tell on paper how to train and trim a grape vine, to obtain the best results. Particularly hard for me, as I am by no means certain I know how myself. But in raising grapes for market there is one very important object to be held in view, and that is both the size of bunch and berry. It is impossible to obtain fine, large, perfect bunches only from strong young canes. To do this it is necessary to renew each year from the base of the vine; to do this is about one of the hardest things a vineyardist has to accomplish. I believe that the market vineyard of the future will be managed on some such a plan as this, instead of planting vines 12x12 feet apart they will be planted 6x12 feet, one half the vines in each row will be allowed to bear fruit, the other half only be allowed to raise young canes for next

year's bearing wood, alternating each year. I believe by some such a system finer fruit could be obtained than by the usual process now pursued. In raising grapes for wine, I take it that it is not so important that we should have extra perfection either in bunch or berry. But in raising grapes, or for that matter, anything else for market, quality or quantity, is the important consideration. Vines should not be allowed to bear fruit the second season, at least not more than a bunch or so on the strongest vines. The young vines of the first year's growth should be cut back to two buds, vines should not be trimmed later than February, because of bleeding as soon as sap starts in the spring.

The canes of the second year's growth should be pinched off when reaching a height of six feet, throwing the growth into laterals. It is on these laterals you may look for fruit another year, but it will be found advisable to cut them back to two or three buds each. The third year you may expect a crop of fruit. Care should be taken not to let the young vines overbear; would advise leaving more bearing wood than was necessary to yield the amount of fruit desired, but would cull out all small and defective bunches, and leave no more than the vine was able to ripen perfectly. A strong, 3-year-old vine will yield ten pounds of grapes, and thirty bunches of Concord should weigh ten pounds on an average. The first crop may be grown on stakes, but after that it will be found advisable to use trellis. Three wires will make a satisfactory trellis; the top wire should be six feet from the ground. The rows should run north and south, so the sun can get at both sides of the trellis.

IN PICKING AND HANDLING

grapes for the market too much care cannot be taken. Care should be taken not to mar the bloom on the grape, its greatest beauty. In sorting, all unripe, cracked or otherwise defective berries should be removed. Mark your name on the package plainly, and don't put anything inside you are ashamed of. As a rule it don't pay to ship fruit that the grower is not proud to acknowledge as his own. That old adage that honesty is the best policy is particularly true in the fruit business; in fact it is the only policy to tie to.

You will understand that in the limits of an ordinary essay it is impossible to treat this subject only in a general way, there are dozens of details relating to this particular branch of horticulture, any one of which if treated thoroughly would wear out your patience, not to say anything of the time required. Planting, cultivation, training, selection of varieties, marketing, winter protection, grape-rot and other diseases of the grape, all these subjects must be thoroughly understood before one can make a complete success of grape-growing. To do so one must read everything that comes to hand on the subject, and hold fast to that which is good. To the beginner would say, that in this as well as in everything else—where there is a will there is a way.

CAN GRAPE-GROWING BE MADE PROFITABLE?

The answer to this depends so very much on the man who attempts it, the policy he pursues, his stick-to-it-iveness, etc., that it is hard to say. This much can be said, all over one cent per pound that can be obtained for grapes after taking out cost of package, freight and commission will be found to be profit. If grapes are given half a chance, a well-established vineyard should produce about 10,000 pounds per acre—that is, a vineyard is as certain

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to produce that as the same acre would be to produce forty bushels of corn, one year with another. The profits on the crop would so very much depend on the quality of the fruit, time of ripening, how it was handled, etc., etc., that were two vineyards planted side by side, one might pay a net profit of from \$300 to \$500 per acre, and the other not pay a net profit at all. And for that matter this is not particularly different from almost any other crop. There is only one right way to do a thing, but about a thousand million wrong ways, some worse than others. But any man with common industry and common sense can surmount all the difficulties he is likely to encounter in growing grapes, and will, likely, make a fair success of it.

The lamented Josh Billings very wisely said "that it was better to know little than to know so blamed much that wasn't so."

We are in receipt of our old friend Dr. Stayman's circular describing the Jewel grape and his No. 1 strawberry. The Doctor is an old and experienced fruit-grower, and he has peculiar taste in selection. He is inventive—a builder in horticulture. This circular can be obtained by persons interested if they will but ask for one.



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The Poultry Yard.

Miscellaneous Egg Lore.

The yolk of egg alone is the better for invalids, and will be frequently relished when the white would be rejected.

When cream cannot be procured for coffee, the yolk of a soft-boiled egg is a very good substitute.

To prevent the juice of fruit pies from soaking into the bottom crust, wash the crust over with a beaten egg before putting in the fruit.

When making frosting in warm weather, set the whites of the eggs on ice for a short time before using.

If the eggs you have to use for frosting are not quite as fresh as you could desire, a pinch of salt will make them beat stiffer.

The white of an egg, an equal quantity of cold water, and confectioner's sugar—triple X—sufficient to make it the required consistency, makes a frosting which is very nice, and as it requires no beating is very easily made.

When beaten eggs are to be mixed with hot milk, as in making gravies or custards, dip the hot milk into the beaten eggs a spoonful at a time, stirring well each time, until the eggs are well thinned, then add both together; this will prevent the eggs from curdling.

It is often a question what to do with either the whites or yolks of eggs which are sometimes left after making cake, frosting, etc. Either will keep well for a day or two if set in a very cool place—the yolks well beaten and the whites unbeaten.

Whites or yolks of eggs may be used with whole eggs in any cake or other recipe calling for eggs, counting two yolks or two whites as one egg.

When eggs are cheap and plentiful in summer, wash all those used in cooking before breaking. Save the shells, and when a quantity are dry, crush them fine; beat half a dozen eggs well and stir them into the shells. Spread them where they will dry quickly, and when thoroughly dry put in a thin cotton bag and hang in a very dry place. In the winter, when eggs are scarce and dear, a tablespoonful of this mixture put in a cup, a little cold water poured over it and left to stand over night or for half an hour or so in the morning before breakfast, will answer every purpose of a whole egg in settling coffee.

Egg stains can be easily removed from silver by rubbing with a wet rag dipped in table salt.

To clean vinegar bottles and cruets, crushed egg shells in a little water is as good as shot, besides being healthier and handier.

To mend broken china, use a cement made by stirring plaster of paris into the white of an egg.

An egg well beaten and added to a tumblerful of milk well sweetened, with two tablespoonfuls of best brandy or whisky stirred in, is excellent for feeble aged persons who can take little nourishment.

Eggs are valuable remedies for burns, and may be used in the following ways: The white of the egg simply used as a varnish to exclude the air; or, the white beaten up for a long time with a tablespoonful of fresh lard till a little water separates; or, an excellent remedy is a mixture of the yolk of egg with glycerine, equal parts; put in a bottle and cork tightly; shake before using; will keep for some time in a cool place.

For inflamed eyes or eyelids, use the white of an egg beaten up to a froth with two tablespoonfuls of rosewater. Apply on a fine rag, changing as it grows dry; or, stir two drachms of powdered alum into the beaten whites of two eggs till a coagulum is formed.

Place between a fold of a soft linen rag and apply.

For a boil, take the skin of a boiled egg, moisten it and apply. It will draw off the matter and relieve the soreness in a few hours.

To cleanse the hair and promote its growth, rub the yolk of an egg well into the scalp, and rinse out thoroughly with soft warm water.

The eggs of the turkey are nearly as good as those of the hen, and that of the goose is about as preferable for most culinary purposes. Ducks' eggs have a richer flavor, but are not as desirable to eat alone; they are, however, as good for all purposes of cookery, and for puddings and custards superior to any. The eggs of the guinea hen are also good for all culinary purposes.—*Good Housekeeping.*

How to Preserve Eggs.

A correspondent of the *Farmer* (England) says, to preserve eggs successfully for some months, get a box that can be fastened down by the lid, place some dry salt at the bottom, put in the eggs as fresh as possible, end upwards, in the salt, (take care that they do not touch each other or the sides of the box), add another layer of salt, then more eggs, and so on until the box is filled up, with salt at the top, so that the box is quite full. Make the lid of the box secure, and place it in a cool dry room, and turn it twice a week, not only from top to bottom, but on its sides, so that the eggs don't lie in the same position more than two or three days at a time. Last summer I preserved some in this way, not less than six months ago, when we were selling fifteen for 1s, wholesale price, and have sold what fresh-laid eggs we have had during the winter at nine for 1s. I have found two or three quite rotten amongst them, but these, of course, were not good when put away, and a few of the yolks were rather stiff, but quite sweet and in their natural color, which I believe was owing to the salt getting damp, the room in which they were kept not being sufficiently dry. The bulk of them have been good and sweet. In fact I have cooked some of them this week. I don't think any one could have known them from fresh-laid eggs.

The author of "Poultry Farming" says the following recipe for storing or "pickling" eggs for winter use is the best and most reliable. "This I say after some years successful poultry farming, for market purposes only: A large earthenware jar—if fitted with a lid; all the better—is the best vessel that can be used. Into it should be put three gallons of cold water, five pounds 1 lb. fresh from kiln, one-half pound cream tartar, one-half pound fine salt, and the mixture well stirred together, then allow it to settle for two days previous to eggs being put in. The eggs should be marked and placed in the jar within three days of the time they are laid, and if possible sufficient to form a layer should be preserved on the same day. When the jar is full, or contains as many as it is wished to keep, the lid should be fitted so as to exclude the air. Treated in this way, eggs will remain in really good condition for at least three months, but will not stand boiling, the "pickle" causing the lime of the egg shell to assimilate, rendering the shell more porous. I have personally treated between 3,000 and 4,000 eggs yearly this way with excellent results, and I do not think a better method of preserving can be adopted."

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[This department of the KANSAS FARMER is in charge of Dr. F. H. Armstrong, V.S., Topeka, a graduate of Toronto Veterinary college, who will answer all inquiries addressed to the KANSAS FARMER concerning diseases or accidents to horses and cattle. For this there is no charge. Persons wishing to address him privately by mail on professional business will please enclose one dollar, to insure attention. Address F. H. Armstrong, V.S., No. 114 Fifth St. West, Topeka, Kas.]

P. S. B. Wamego, Kas.—No mechanical device will be of much service. Would advise you to let colt alone. It will outgrow it in time.

J. L. Pipkin.—An abscess may be forming in the region you speak of, or it may be a dropsical swelling occasioned by the injury. It would be well to probe wound to ascertain its depth and direction. It may be necessary to enlarge wound to obtain drainage. If an abscess use hot fomentations to part, to promote suppuration and pointing. If swelling be only of a dropsical nature (putting on pressure) the hot fomentations, supplemented with plenty of hard rubbing, will dispel that. Give animal plenty of grass and soft feed. Give following powders night and morning in soft feed: Nitrate of potash, 6 oz.; mix. Make twelve powders.

Listing as an Economical Way to Raise Corn.

An address read before the Farmers' Institute at Gardner, Kas., January 3, 1888, by Charles Hewlett.

In taking up this subject we are aware that there are many differences of opinion regarding it and its practicability.

The average farmer finds it necessary to economize in every way possible, in order to realize any profit in raising corn for market. For that reason we are continually trying some new process of preparing the soil and planting the seed. Among these, the listing process came into use in Illinois, near Rock Island, some fifteen years ago, and since that time has been tried in the Western corn-growing States with varied success.

I have used the lister in this part of Kansas for the past five years, and have demonstrated, to my own mind at least, that it can be followed successfully in the lighter soils of Kansas, and where the subsoil is porous, on any kind of soil.

In this county, where we have a hardpan subsoil, it is questionable as to its practicability on the heavy and stronger soils, where it has not a natural drainage.

There are several reasons why it is the best and most economical way: First—One man will tend a larger acreage with the same labor that is required in any other mode of successful culture. Second—It will stand two weeks longer drouth, and come out in better shape than corn planted on the surface plan. Third—It will stand up better, on account of its being rooted deeper in the ground. Fourth—It can be kept more clear of weeds with less labor, for the reason that we are working the soil to the corn and filling up the trench every time we plow, till the trench made by the lister is level full. Then we have the same chance to kill weeds and clean our corn after it is knee-high, and has been plowed twice, that you have from the first to the last on the surface plan. And on this account, if on no other, is better than corn planted in drills with the planter.

I use the single lister, and follow with the pony drill. It gives better results in the long run than the combined machines which have been put on the market up to the present time, although if the season be favorable, there is little difficulty in getting a stand of corn with either.

The principal reasons in favor of the single lister are these: First—Experience has taught me that the deeper the subsoiler is run the better condition the bottom of the trench is in for planting, and with all the combined machines I have seen this cannot be done beyond the depth the corn should be planted, as the corn is dropped at the heel of the subsoil plow, and for this reason is on the hard ground when planted; while with the single lister you may subsoil as deep as you like, and plant as shallow with the one-horse drill as you can cover the corn, giving plenty of loose ground under the germinating seed for the tiny roots to penetrate. Second—In using either it is best to use three horses on the lister; that brings one horse in the furrow all the time. This with the combined machines allows the horse to tramp every row after it is planted; and if you ever saw a horse walk down a corn row, you

know about how many hills he will tramp out of existence. In this case, when the horse steps on a hill it packs the ground so hard that it is nearly exhausted when it comes through, if it ever gets that far along.

I might give statistics to prove some of these points, especially in regard to the tending a larger acreage and the greater yield of corn per acre, but it is not necessary at this time.

Entering In.

The church was dim and silent
With the hush before the prayer;
Only the solemn trembling
Of the organ stirred the air.
Without, the sweet pale sunshine;
Within, the holy calm.
Where priest and people waited
For the swelling of the psalm.

Slowly the door swung open,
And a little baby girl,
Brown-eyed, with brown hair falling
In many a wavy curl;
With soft cheeks flushing hotly,
Gly glances downward thrown,
And small hands clasped before her,
Stood in the aisle alone.

Stood half abashed, half frightened,
Unknowing where to go.
While like a wind-rocked flower
Her form swayed to and fro;
And the changing color fluttered
In the little troubled face,
As from side to side she wavered
With a mute, imploring grace.

It was but for a moment;
What wonder that we smiled
By such a strange, sweet picture
From holy thoughts beguiled?
Up then rose some one softly,
And many an eye grew dim,
As through the tender silence
He bore the child with him.

And I, I wondered, losing
The sermon and the prayer,
If when some time I enter
The many mansions fair,
And stand abashed and drooping
In the portal's golden glow,
Our God will send an angel
To show me where to go!

—Sunday School Visitor.

Of two colts similar in disposition and sense, one may develop into a steady and valuable family horse, while the other may be vicious, treacherous and unsafe—all because of a difference in the men handling them.

For the delicate and aged and all in whom the vital current is impoverished and sluggish, Ayer's Sarsaparilla is the very best tonic. It restores the wasted tissues, and imparts to the system surprising elasticity and vigor. Price \$1. Worth \$5 a bottle.

An enterprising firm in a certain Missouri town has the following advertisement: "Any man who drinks two drams of whiskey per day and pays 10 cents a drink for it, can have at our store, thirty sacks of flour, 220 pounds of granulated sugar, and seventy pounds of green coffee for the same money, and get \$250 premium for making the change in his expenditures."

I have great faith, says a writer upon the subject of drinks, in the efficacy of water as a tonic for the stomach, and a cure for an inflamed condition which creates thirst. A hearty draught taken half an hour before each meal and on going to bed, helps greatly to allay natural thirst. Another writer suggests the drink of water to be taken an hour before breakfast followed by brisk exercise.

A Baltimorean recently dropped asleep on a park bench, when, his head falling forward, he unconsciously choked to death over the stiff edge of his celluloid collar. A dog died in Illinois the other day from drinking the water in which a flannel shirt had been rinsed. A St. Louis man has died of erysipelas contracted from a verdigris brass collar-button eating into his neck; and a man in Chicago was roasted to death by the firing of his cotton underclothing as dried before an open grate.

"The peerless empire of form and color, is found in Colorado," says a great artist. So are there many other wonderful effects. There is that grand triumph of engineering skill, the Bow-Knot Loop, famed all over the world; the pretty town of Graymont nestled against the base of Gray's Peak, the giant prince of the range; sunrise on Gray's Peak—a sight once witnessed never to be forgotten; Idaho Springs the beautiful, a restful spot blessed with the healing waters for all who come, within two hours ride of young levithian Denver; the storied gold camp of Georgetown perched in the upper air of the mountains, ever fresh and cool and clear—these are a few of the delightful spots in the "American Alps" reached by the Colorado Central Division of the Union Pacific railway in Colorado.

Poems of the Plains.

BY THOMAS BROWNE PEACOCK, OF TOPEKA.

The retail price of this gilt-edge volume is \$2.50. Contains 330 pages, has a fine engraving of the author, is in the third edition, and is being translated into the German language. This book includes the famous "Rhyme of the Border War," an historical poem of the Kansas Missouri guerrilla war, which the Chicago *Inter Ocean* says "is a poem of great strength and one of the best war poems ever written."

Mr. Peacock, as is well known, is the most noted poet in Kansas, and his works have attracted the attention of foreign as well as home critics.—*Capital, Topeka.*

For a limited time, to introduce the book, we offer the "Poems of the Plains" and the KANSAS FARMER one year, both for only \$2. Address KANSAS FARMER CO., Topeka, Kas.

No mother can waste her physical strength nor dwarf her moral and spiritual capacities, without entailing a reaction on the lives of her children.

When a Turk dies, the legs are tied together and the arms stretched by the sides. The burial takes place as soon as possible after the death. The corpse is handled very tenderly, as the Turks believe any lack of tenderness would bring the curse of the dead man's soul upon them.

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought.

T. E. BOWMAN & Co.,
Jones Building, 116 West Sixth street,
Topeka, Kas.

The London *Gardeners' Chronicle* recommends as a simple method of obtaining clean beeswax direct from the comb, that the latter be melted in hot water, and a hoop that will fit into the container, covered with cheese-cloth, fastened down into it below the surface of the water. The melted wax rises to the surface through the cloth, and when the water is cool, is found on top in a perfectly clean cake.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for Consumption. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., N. Y.

A smart team turning a good furrow in spring, either stubble or sod, should be able to turn over one and a half to two acres. When larger days' work than this are reported it is usually at the expense of the team, or perhaps of the plowing. So much depends on the character of the work in fitting the land that a poor plowman should not be tolerated, however large a day's work he may claim to be able to do.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellow-men. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYSE, 149 Power's Block, Rochester, N. Y.

Excursion to New York City.

For the Centennial Celebration—Inauguration of President Washington—on the 29th and 30th of April, tickets to New York and return will be on sale at low excursion rates; about one fare for round trip—at offices of the Ohio & Mississippi Railway in St. Louis, and at offices of connecting lines west via the O. & M. A choice of four routes is offered by the O. & M. Ry. from St. Louis.

Tickets on sale in St. Louis April 27th and 28th, good leaving New York for return until May 6th, inclusive.

For tickets via this line and further information call on nearest local agent. St. Louis offices 101 and 103 N. Fourth St. and Union Depot.

THE MARKETS.

(APRIL 20.)

Kansas City.

WHEAT—Nominal. No. 2 red, cash, 76c bid.
CORN—Quiet. No. 2 white, May, 24c bid, 25c asked.

OATS—No. 2, April, 21c asked.

RYE—No. 2, cash, 38c asked.

PRODUCE—Butter, steady; fancy creamery, 22a23c; good, 19a21c; dairy fancy, 18c. Eggs, firm at 8c.

CATTLE—Steady. Butchers, \$3 15a3 90; cows, \$1 65a3 00; stockers and feeders, \$3 00a3 60.

SHEEP—Active. Sales at \$3 10a4 15.

HOGS—Weak. Packing and shipping, \$4 30a 4 55; inferior, \$3 55a4 15.

St. Louis.

WHEAT—Lower. No. 2 red, cash, 83c.

CORN—Quiet. No. 2 mixed, cash, 30c.

OATS—Lower. No. 2 cash, 23c bid.

PRODUCE—Butter, firm; creamery, 22a25c; dairy, 21a22c. Eggs, steady at 8c.

CATTLE—Strong. Choice heavy native steers, \$3 80a4 40; fair to good, \$3 06a3 90; stockers and feeders, \$2 00a3 15.

SHEEP—Strong. Fair to choice, \$3 00a4 80.

HOGS—Strong. Choice heavy and butchers selections, \$4 70a4 85; packing, \$4 55a4 65.

Chicago.

FLOUR—Unchanged.

WHEAT—Dull and lower. No. 2 spring, 86c a86c; No. 3 spring, 75a85c; No. 2 red, 86c a86c.

CORN—Quiet and steady. No. 2, 34c.

OATS—No. 2, 23c.

RYE—No. 2, 43c.

PRODUCE—Butter, unchanged; fancy creamery, 22a25c; choice to fine creamery, 21a 23; fine dairy, 20a23c. Eggs, firmer at 10c.

CATTLE—Steadier. Choice to extra beefs, \$4 25a4 35; steers, \$3 25a4 10.

SHEEP—Steady. Natives, \$3 75a5 40; lambs, \$4 50a6 10.

HOGS—Steady. Mixed, \$4 70a4 87c; heavy, \$4 70a4 87c.

New York.

WHEAT—Dull and weaker. No. 2 red, 85c;

No. 1 red, 96c.

CORN—Strong. No. 2, 44c.

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The Northern Pacific owns and operates 621 miles, or 521 miles, or 56 per cent. of the railroad mileage of Washington. Its main line extending from the Idaho line via Spokane Falls, Cheney, Sprague, Yakima and Ellensburg, through the center of the Territory to Tacoma and Seattle, and from Tacoma to Portland. No other transcontinental through rail line reaches any portion of Washington Territory. Ten days stop over privileges are given on Northern Pacific second-class tickets at Spokane Falls and all points west, thus affording intending settlers an excellent opportunity to see the entire Territory without incurring the expense of paying local fares from point to point.

The Northern Pacific is the shortest route from St. Paul to Tacoma by 207 miles; to Seattle by 177 miles, and to Portland by 324 miles—time correspondingly shorter, varying from one to two days, according to destination. No other line from St. Paul or Minneapolis runs through passenger cars of any kind into Idaho, Oregon or Washington.

In addition to being the only rail line to Spokane Falls, Tacoma and Seattle, the Northern Pacific reaches all the principal points in northern Minnesota and Dakota, Montana, Idaho, Oregon and Washington. Bear in mind that the Northern Pacific and Shasta line is the famous scenic route to all points in California.

Send for illustrated pamphlets, maps and books giving you valuable information in reference to the country traversed by this great line from St. Paul, Minneapolis, Duluth and Ashland to Portland, Oregon, and Tacoma and Seattle, Washington Territory, and enclose stamps for the new 1899 Rand-McNally County Map of Washington Territory, printed in colors.

Address your nearest ticket agent, or CHAS. S. FEN, General Passenger and Ticket Agent, St. Paul, Minn.

OKLAHOMA--THE PROMISED LAND.

"On to Oklahoma!" is now the watchword of the thousands of home-seekers who have anxiously awaited the President's proclamation opening this vast and rich country to public settlement. Colonies are being formed in every State and Territory in the Union. The millions of acres may not furnish a home-stead for all who come, but there will be thousands ready to relinquish their claims at a nominal figure. The intending settler should look the country over. Go via the GREAT ROCK ISLAND ROUTE, popularly known as the "People's Favorite" wherever it runs. KINGFISHER, the U. S. Land Office for Oklahoma, is the coming metropolis of the Indian Territory, and is located on the ROCK ISLAND ROUTE. A fast line of stages has been put on to Fort Reno, to connect with the trains of the Rock Island Territorial extension. This is the cheapest and best route and direct to the place you want to go. Through solid vestibule trains from Chicago via Kansas City and St. Joseph, also from Denver, Colorado Springs and Pueblo to the Territory, through the cities of Topeka, Hutchinson, Wichita, Wellington and Caldwell. It will be to your advantage to locate on the People's Favorite railway. Look at the map. The Rock Island has excellent connections from all portions of the Union. For full information concerning Oklahoma, the land laws, and the best way to get into the country, address:

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STARTLING DISCLOSURES

giving stern facts regarding your PAST, PRESENT and FUTURE, FREE, by wonderful clairvoyant. If sick, send one leading symptom and two 2-cent stamps for diagnosis. Address The BANNER OF LIFE, G'd Rapids, Mich.

Some Suggestions About the Training of Colts.

It is said that among men education begins in the cradle. The same truth in substance may be applied to the training of animals as well. The place to begin the training of a horse is in the pasture and the stable with the colt in order that an animal may be well educated. For any and for all purposes the earlier it is begun the more satisfactory the result will be. Here are some excellent suggestions about the training of colts, which we take from the London *Live Stock Journal*, as follows:

"In most sections of agricultural practice we have made a decided advance, and it is somewhat singular that in the rearing, training and breaking of animals—what we might style education of animals, so conducive to the comfort and discomfort of man—we still pursue a course that is closely associated with the dark ages.

"One common foundation cause forms the basis of our non-success in education of animals, and it is the root and the resultant cause of the evils that follow. We assume that all animals at birth possess hereditary vice, and that that vice must be eradicated before the animal can become a useful servant to man. This is most certainly a mistake, and one that leads up to numerous evils. The same erroneous practice prevails in the training of horses, bulls, dogs, etc., but it is probably in the case of horses where the greatest mischief results. In the education of a colt or a filly or a young bull, the same care is needed as in that of a child. The disposition should be studied, and defects eradicated by kind yet firm treatment. At present, if a foal is of a lively temperament, it is at once put down as vicious, and if either of its parents have showed what is mis-called vice, the result of mistaken brutality in their education, then the foal's liveliness is put down as hereditary vice, and a prolonged course of harsh conduct and beating is deemed necessary to effect a cure. If, on the other hand, the young animal is of a slow and heavy nature, it is erroneously supposed to be the result of vicious sullenness, and the same treatment as in the case of the lively foal is undertaken—harsh treatment and beating to bring them into so-called subjection. In each case this cruel discipline has just the opposite effect to that sought, and hence we have sadly too many kicking, biting, jibbing and bolting horses. In place of having horses which entertain affection for man, we have them in constant fear of man, ever expectant of a blow, and their worst actions, often leading up to accident or death, are too often the result of this fear; possibly some movement of the driver being misconstrued into the intention to strike a blow. In the breaking and education of all young animals, firmness should blend with kindness, but never with harshness or brutality."

Relative Cost of Butter and Beef.

Writing to the *Philadelphia Press* on the proposition "That it costs more to produce a pound of butter than a pound of beef," Waldo F. Brown says:

"That there is more money in butter than in beef of any kind needs no argument; and the idea is absurd that a man ought to keep a 1,200 pound cow in his dairy because she will make a greater weight of old cow-beef when unfit to milk longer, when he can get an 800-pound cow that will average 50 per cent. more butter. I doubt if there is a farmer in our county who has produced a beef in the last five years that has

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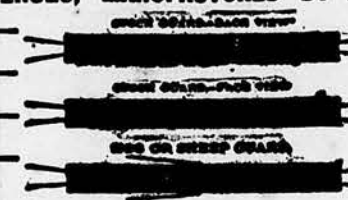
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paid current prices for its food, and yet nine out of ten of them will tell you that the introduction of the Jerseys has been a curse to the community, simply because the size of the cattle has been reduced. I introduced Jersey blood on my farm ten years ago with considerable misgivings, for I shared the general prejudice. I began by crossing good native cows with a thoroughbred Jersey bull. I have now reached the fifth cross, and I have not had a poor cow or one that I could not sell for from 50 to 100 per cent. above the price of common cows. I have now a small herd that will milk eleven months in the year, and make, at the lowest calculation, 50 to 100 per cent. more butter than the same number of native cows such as I could buy in the neighborhood. I think my cows have cost me considerably less than native cows would, for \$1 for the service of the sire is all the extra cost, and it certainly takes less food to grow and sustain an 800-pound cow than it would one weighing 1,000 or 1,200 pounds.

Very Sensible "Japs."

In Japan the old-school physicians are permitted to wear only wooden swords. This is a gently sarcastic way of expressing the opinion that they kill enough people without using weapons. But the druggist who introduced Dr. Pierce's Golden Medical Discovery into the Empire, carries a fine steel blade. It was found that all who tried this wonderful remedy for coughs, colds, consumptive tendencies, blood, skin and liver troubles, were, without exception, greatly benefited. The Mikado himself is said to have "tuned up" his system by its use, and the importer was therefore permitted the exceptional honor of wearing the sword of the nobility.

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Pigs from ten first-class boars for the season's trade.

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WM. PLUMMER, breeder and shipper of POLAND-CHINA SWINE and Light Brahma Fowls of the best strains. 35 choice sows bred to three first-class boars for the season's trade. Young stock for sale, and eggs in season. Farm three and a half miles southwest of Oage City, Kas. WM. PLUMMER, Oage City, Kas.

Walnut Grove Herd of Poland-Chinas

Pigs from three first-class boars for sale. Am taking orders for fall pigs, to be delivered at from eight to ten weeks old, at \$3 per head, or in pairs \$15. Sows in pig or with litters, for sale. A few choice males on hand. My stock is of the best strains in America. Inspection desired. Stock recorded in Ohio Poland-China Record. Pigs from twelve exceeding fine sows. Took six first and two second premiums at Topeka and Ottawa, only places shown, including grand sweepstakes at Ottawa. V. B. HOWEY, Box 103, Topeka, Kas.

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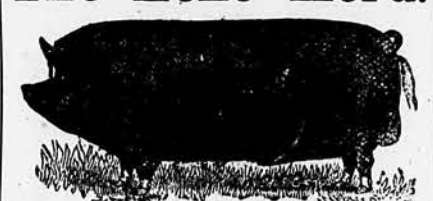
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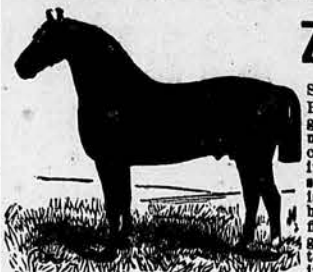
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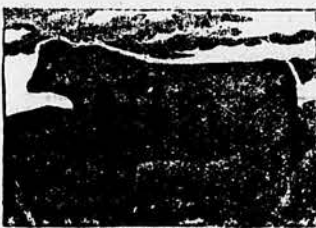


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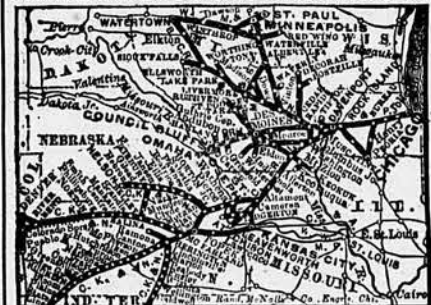
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There are many troubled with too frequent evacuations of the bladder, often accompanied by a slight smarting or burning sensation, and weakening of the system in a manner the patient cannot account for. On examining the urinary deposits aropy sediment will often be found, and sometimes small particles of albumen will appear or the color be of a thin, milky hue, again changing to a dark or torpid appearance. There are many men who die of this difficulty, ignorant of the cause, which is the second stage of seminal weakness. The doctor will guarantee a perfect cure in all such cases, and a healthy restoration of the genito-urinary organs. Consultation free. Send 2-cent stamp for "Young Man's Friend, or Guide to Wedlock."

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OPIUM Morphine Habit Cured in 10 to 20 days. No pay till cured. **Dr. J. Stephens,** Lebanon, Ohio.

THE STRAY LIST.

HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the Kansas Farmer, together with the sum of fifty cents for each animal contained in said notice.

And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5.00 to \$50.00 is inflicted on any failure of a Justice of the Peace, a County Clerk, or the proprietors of the FARMER for a violation of this law.

Broken animals can be taken up at any time in the year. Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray. If an animal liable to be taken up, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

Any person taking up a stray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered; also he shall give a full description of the same and its cash value. He shall also give a bond to the State of double the value of such stray.

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray may, within twelve months from the time of taking up, prove the same by evidence before any Justice of the Peace of the county, having first notified the taker-up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs.

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisal.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor, and shall forfeit double the value of such stray and be subject to a fine of twenty dollars.

FOR WEEK ENDING APRIL 11, 1889.

Greenwood county—J. W. Kenner, clerk.

STEER—Taken up by J. W. Davidson, in Bachelor tp., March 6, 1889, one red yearling steer, white on back and in forehead; valued at \$15.

Cowley county—S. J. Smock, clerk.

PONY—Taken up by J. E. Campbell, P. O. Torrance, February 20, 1889, one dark bay male pony, anchor on left flank and bar below; valued at \$15.

POXY—By same, one light bay male pony, pitch fork brand on left hip; valued at \$15.

Chase county—J. S. Stanley, clerk.

HEIFER—Taken up by John C. Denby, in Bazaar tp., P. O. Birley, March 11, 1889, one yearling roan heifer with red neck, branded 1R on right hip; valued at \$12.

HEIFER—By same, one yearling red and white heifer, branded 1R on right hip; valued at \$14.

HEIFER—Taken up by W. N. Oles, in Bazaar tp., P. O. Bazaar, March 30, 1889, one three-year-old red and white heifer, under-bit in each ear; valued at \$12.

Osage county—R. H. McClair, clerk.

PONY—Taken up by J. M. Brewer, in Grant tp., March 20, 1889, one bay pony mare, about 8 years old, hind feet white, a small bunch on right fore leg, white spot in face between eyes.

Labette county—W. J. Millikin, clerk.

MARE—Taken up by L. Metzger, in Elm Grove tp., March 21, 1889, one light brown mare, white forehead, three white feet, branded C on left snout der.

FOR WEEK ENDING APRIL 18, 1889.

Decatur county—R. W. Finley, clerk.

COLT—Taken up by E. Wilson, in Lyon tp., March 8, 1889, one sorrel horse colt, 8 years old, thirteen hands high, no marks or brands; valued at \$40.

FOR WEEK ENDING APRIL 25, 1889.

Saline county—Joseph Sargent, clerk.

COLT—Taken up by O. O. Lundall, in Liberty tp., March 30, 1889, one roan horse colt, star in forehead, had halter on; valued at \$25.

STEER—Taken up by Luther Hall, in Liberty tp., March 2, 1889, one mouse-colored steer, 4 years old, dehorned, brand on right hip supposed to be I. F., both ears cropped; valued at \$15.

Pawnee county—James F. Whitney, clerk.

MARE—Taken up by Francis Howell, in Garfield tp., P. O. Garfield, April 2, 1889, one bay mare, 13½ hands high; valued at \$15.

Greenwood county—J. W. Kenner, clerk.

STEER—Taken up by J. J. Wassam, in Spring Creek tp., November 1, 1888, one 2-year-old red steer, white strip under belly, tail white at end, right ear out or frozen off at the point, no marks or brands visible; valued at \$17.

Crawford county—J. C. Gove, clerk.

COW—Taken up by S. B. Gibson, in Sheridan tp., P. O. Cherokee, March 28, 1889, one red cow, star in face, slit in right ear; valued at \$14.

Too Late to Classify.

S. C. BROWN LEGHORNS EXCLUSIVELY—At S. C. Evergreen Fruit Farm. Mrs. Belle L. Sproul, Frankfort, Kas.

SWEET POTATO PLANTS.—All of the leading varieties at bed-rock prices. Rates given on application. S. Cox, Box 64, Lawrence, Kas.

PASTURE FOR 200 HEAD—To lease, or will take in that many very cheap. G. Z. Barnes, Yates Center, Woodson Co., Kas.

FOR SALE—The Thoroughbred running stallion Jime Gled. Jime Gled is a dark bay, 16 hands high, weighs 1,050 pounds. Is a sure breeder and a horse of great style, fine finish and wonderful endurance. If not sold in fifteen days will finish the season at usual prices—\$35 to insure, \$25 for the season. Address O. D. Fisher, Morse, Johnson Co., Kas.

BEEES, HIVES, ETC., PLYMOUTH ROCK EGGS, very cheap. St. Joseph Apiary, St. Joseph, Mo.

SWEET POTATO, CABBAGE & TOMATO PLANTS—At \$1.50 per 1,000. Transplanted tomato and peppers at \$3 per 1,000. S. B. Mountz, Belle Plaine, Kas.

Farmers, Stockmen, Horse Dealers, Dairy-men.

If the stock on my farm at Kingman, Kansas, is not sold in a body, by May 1st, 1889, I shall be prepared to dispose of the same in large or small lots, at low prices. 100 head of imported and home-bred Holstein-Friesian cattle of all ages. Young stock bred from the same, of large milking families and of good individual merit. Also a fine lot of grade Holstein Heifers from Thoroughbred Short-horn Cows.

90 Mares and Colts 90

These Mares are all well graded, ranging from 1150 to 1500, all stunted to the imported Percheron Stallion Murat (2914); also a fine lot of colts and fillies from the above horse. I will close these out for cash. Correspondence promptly answered. For particulars address T. G. HINDS, Kingman, Kas.

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TRADE MARK.

Years ago I invented and used on my own herd a "Horn-Killer"—something to stop the growth of the young horn. I have now perfected it, and am prepared to give it to the public. Price 75 cents per bottle. One bottle is enough for forty calves. I propose that others shall aid in this work, and want agents everywhere. County rights for sale cheap. Right to patent fully protected. Full directions with every package. Also "Haff's Dehorning Saw" and two blades \$1.50, and "Haff's Cattle Tags" for sale. Address H. H. HAAFF, Box 193, Chicago, Ill.



Kill Them Before They Grow.

Brayton's Sure Horn Destroyer, the greatest discovery of the age. A chemical compound, which applied to the embryo horn will kill it without injury to the calf, leaving the head smooth as a ball. This easy and harmless method of destroying the horns does away with the objections of cruelty urged against the saw and knife. Get a bottle of the DESTROYER now. You will need it soon. It should be applied before the horn comes through the skin. Then it is sure. It is easily applied. Every bottle guaranteed. Bottle containing sufficient to destroy horns on forty head, sent prepaid on receipt of 75 cents. A. W. BRAYTON, Mount Morris, Illinois.

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Owner of the right for Shawnee and Wabunsee counties and agent for E. P. C. Webster.

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WOOL Commission Merchants.

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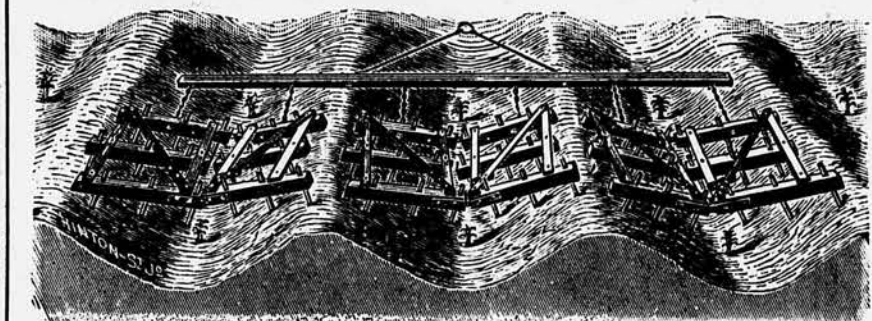
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An Automatic or Self-Regulating Stock Waterer.

Can be attached to barrel, tank or pond. Keeps on hand a constant and regular supply of water. One tank or trough especially for hogs. For detailed description send for circular. Correspondence solicited. Agents wanted. Territory for sale. Manufactured by PERRY & HART, P. O. Box 391, Abilene, Kansas.



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A common-sense all-purpose implement. Ask your dealer for it. Prices on application. Manufactured by A. B. CLIPPINGER & BRO., Centralia, Kansas.

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is full of useful information on Woman's Handiwork: Knitting, Crochet-work, Embroidery, Art Needlework, and other household topics of practical character. Every lady should subscribe for it. Price, 50 cts. a Year. The Dorcas Magazine, 19 Park Place, New York.

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This Harrow will increase your Corn, Ensilage and all other crops, and save you labor. 30,000 in use. One at wholesale price where I have no agent. Send for large illus. circular.
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Send 20 cts. for mailing catalogues with full particulars.
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HENCH'S RIDING or WALKING STEEL CULTIVATORS
With Double Row Corn Planter and Fertilizer complete in one machine. Crowned with Medals since 1879.
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The first invented, never yet equalled, and the only one that uses the patented submerged process, Which gives it its great value over all others.
Where there are no agents, will sell one at wholesale price. Send for circular.
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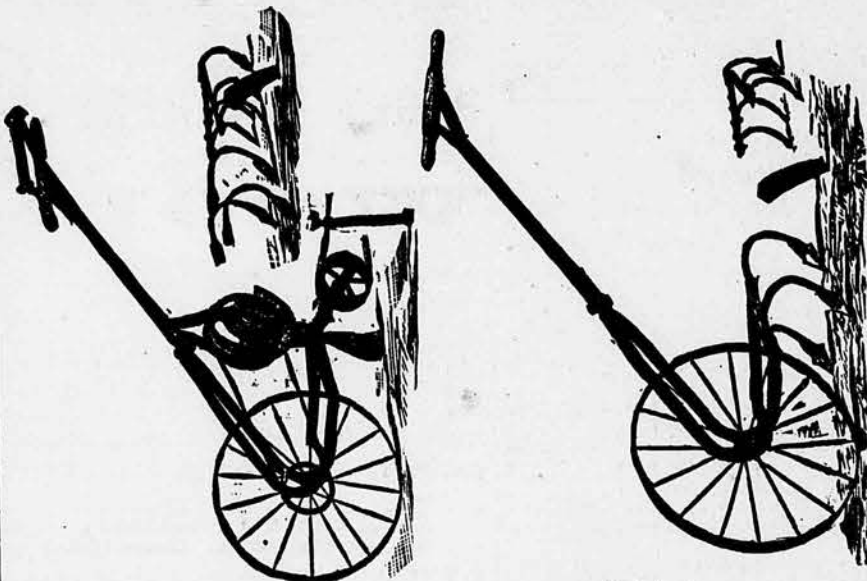
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With METAL WHEELS and SPRINGS at Ends of Beams.
This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sidewise. The spring at the front end of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. We attach these Beams also to our Riding and Tongueless Cultivators. This Cultivator has no equal in the market, and can not fail to be appreciated by any farmer who sees it. We also manufacture the BUCKEYE DRILL, BUCKEYE SEEDER, BUCKEYE CIDER MILLS and HAY RAKES.
Branch Houses:—Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; and San Francisco, Cal. Write for Circular to either of the above firms or to **P. P. MAST & CO. SPRINGFIELD, OHIO.**

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The best device in the world for the purpose of catching and holding cattle to dehorn. Warranted to give entire satisfaction. Agents wanted in every county not occupied—experienced Dehorners preferred.

If you want Dehorning by as good a hand as the best, done the easiest possible way.
SATISFACTION OR NO CHARGE.
Write to E. P. C. Webster, Marysville Kansas.
Write for Illustrated Circular. [Always mention the KANSAS FARMER when writing.]
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ENTIRELY NEW. 10,000 in ACTUAL USE.
SUPERSEDES THE PLOW! BEATS THE WORLD! GROUND MADE INTO A PERFECT SEED BED. Has a SEEDING ATTACHMENT for SOWING ALL KINDS OF GRAIN.
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SAVING 25 TO 40%
NO MIDDLEMEN PROFITS NOR PENSES OF TRAVELING MEN
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Send for our Illustrated Catalogue and Treatise on Ensilage and Silos. **E. W. ROSS & CO. SPRINGFIELD, O.** OR **THE KEYSTONE IMP. CO.** General Southwestern Agents, KANSAS, MO.

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FOR EVERY PURPOSE
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Investment small, profits large. Send 20c. for mailing large illustrated Catalogue with full particulars.
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FOR CONVENIENCE OF handling Milk and Cream with best results, leads the van. Has double skimming attachment. Drawing milk or cream first as desired. No fear of sediment. Butter made from it was awarded the GOLD Medal at Indiana State Fair, 1888, and St. Louis (Mo.) Fair, '88. It has taken the FIRST PREMIUM at nearly every State Fair where exhibited. WE FURNISH EVERYTHING USED IN BUTTER FACTORIES OR DAIRIES. Send for illustrated circulars. Agents wanted in every county and town.
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PERFECT MOWING MACHINE KNIFE GRINDER. Can be carried into the field and attached to Mowing Machine Wheel. New Descriptive Catalogue Free.
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"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order.

Special.—All orders received for this column from subscribers for a limited time, will be accepted at one-half the above rates—cash with the order. Will pay you! Try it!

SEND NOW—Mammoth Bronze Turkey eggs, fourteen for \$2.50. "Bill Nye," a thirty-pound young tom at head. John C. Snyder, Constant, Kas.

HOLSTEIN BULL CALVES AT LOW PRICES. If taken soon. Echo, Aegis, Aaggie and Netherland families. M. S. Babcock, Nortonville, Kas.

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SHORT-HORNS.—For sale cheap, a number of choice thoroughbred bulls, cows and heifers. Address or call on W. W. Waitmire, Carbondale, Kas.

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WANTED—To buy for cash one second-hand separator. Address Cheney Creamery Co., Cheney, Kas.

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100 BUSHELS OF THAT EXTRA EARLY YELLOW ninety-day seed corn sold. One hundred bushels yet to sell. N. H. Brosius, Topeka, Kas.

EXTRA EARLY SEED CORN.—Orders filled at once at prices given in this column March 7, until further notice. W. I. F. Harden, Seedman, Box 1, Hartford, Kas.

600-ACRE STOCK FARM—Six miles from Eureka, Kas., on Spring creek. 160 acres in high state of cultivation; good bottom land; plenty running water that never freezes; plenty timber; over eight miles fencing on farm; good bearing orchard; good six-room house and cellar; good barn and cattle sheds, covered with corrugated iron. I want to trade for a small farm near some good town in eastern Kansas. I mean business. J. C. Netherton, Eureka, Kas.

PURE PEKIN DUCK EGGS—Seventy-five cents per thirteen. Would like to exchange for pure Plymouth Rock and Bronze turkey eggs. Mrs. V. A. Beeson, Fall River, Kas.

KANSAS ECONOMY INCUBATORS FOR SALE. Also 25-cent book, which tells how to make and operate incubators and manage poultry or chicks hatched from incubators. Jacob Yost, Topeka, Kas.

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FOR SALE—The fine imported Clyde dale stallion "Balfour." The above named horse will be offered at private sale for the next thirty days, and if not sold will be put up at auction on May 1, and sold to the highest bidder on a year's time with approved security. For particulars address Chas. H. Falk, Kinsley, Kas.

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FOR SALE OR EXCHANGE—For good horses, imported and fine-bred Galloway and Aberdeen-Angus cattle. A. J. Grover, Muscotah, Atchison Co., Kas.

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WANTED—To negotiate with parties interested in starting a cheese factory or separator creamery. Have some means and fourteen years experience as butter and cheese-maker. Address J. L. Ables, 1823 New Jersey St., Lawrence, Kas.

WANTED—A partner with capital, to stock an ensilage farm near Topeka, or stock to feed. Address "Ensilage," KANSAS FARMER office.

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Am always in the market to buy or sell **SEEDS** J. G. PEPPARD, 1220 Union Ave., Kansas City, Mo.

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2,000,000 HEDGE PLANTS—125,000 two and three-year-old apples, 500,000 Russian mulberries, catalpas, etc. A full line of nursery stock. Babcock & Stone, North Topeka.

FOR SALE—Twenty-five Thoroughbred Hereford Bulls. Extra fine individuals, of the Fortune, Wilton and Grove families. Also cows and heifers. This herd is one of the oldest and largest in the country. Address W. G. Hawes, Mount Pleasant Stock Farm, Colony, Kas.

TWO-CENT COLUMN—(Continued.)

EGGS.—Standard White Leghorn, Plymouth Rock, Brown Leghorn, \$1 per thirteen; Bronze turkey, \$2. E. B. Reay, Elk Falls, Kas.

SEED CORN. J. G. PEPPARD, 1220 Union Ave., KANSAS CITY, MO.

EGGS.—Toulouse Geese, Wyandotte and Plymouth Rocks. Circular free. I. H. Shaanon, Girard, Kas.

SHORT-HORNS AND JERSEYS—Males and females, of any age, for sale by John T. Voss, Girard, Kas.

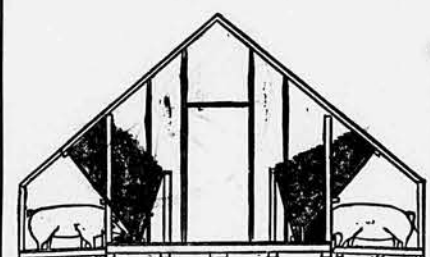
POULTRYMEN!—The Fanciers' Review, Box K, Chatham, N. Y., a 16-page poultry journal, 25 cents a year. Three sample numbers 10 cents.

FOR SALE—Twenty thoroughbred Poland-China boars, ready for service now. Address Walter Ferguson, Valley Falls, Kas.

SEED CORN—Pure Golden Beauty, at \$1 per bushel. Sacks free. Address Chas. McCoy, Thompsonville, Jefferson Co., Kas.

1,000,000 CRESCENT STRAWBERRY PLANTS.—1,000, \$2.00; 5,000, \$1.75; 10,000, \$1.50; 20,000, \$1.25 per 1,000. E. J. Holman, Leavenworth, Kas.

The Hog Sanitarium



[Patented Oct. 9, 1888, by a practical feeder.]

For Saving Feed and Work and Protecting Hogs from Disease.

A Granary and Automatic Feeder Combined, to be erected in the Feed Yard. Will store 900 bushels of corn; feed 150 head of hogs. Any farmer can build it.

For feeding luxuriant and nitrogenous food such as Bran, Ground Rye, Ground Oil Cake, Shorts, etc., with Corn, shelled or ground, dry, and without waste; also for feeding salt at all times, thoroughly mixed through the feed. Warranted, when properly used, to save at least 20 per cent. of the feed as usually fed. Not by the direct saving alone, but mostly by reason of increased thrift and rapid and even fattening. Will require for construction about 2,000 feet of lumber and 3,000 shingles for feeder of regulation size. Can be built of less capacity and added to at any time to suit the farmer's needs.

The use of this feeder with a proper supply of nitrogenous and laxative food with corn, will in two weeks' time place the most unthrifty hogs in good condition, if not already infected with cholera. It is the greatest safeguard against cholera. Sanitarium hogs eat regularly and often; never overeat. No mud or filth to consume; all work and waste practically dispensed with.

The use of shelled corn or meal in the Sanitarium is not half the trouble it is to feed ear corn. Keeps the yard free from litter; gives all hogs in the yard the same chance to thrive, all having equal access to feeder. When you see your corn trampled in the mud and filth you feel like kicking yourself. When you witness hogs eating from the Sanitarium in a muddy time you smile; so do the hogs. You do not hesitate to provide for the comfort of other farm animals; why neglect the hog? He brings a quicker and better return for money invested than any other animal. Protect his health and feed him properly and he will be more remunerative to you. I furnish Permit with full instructions about building and operating Sanitarium on one quarter section or less tract of land, for \$10.00. To introduce it, I will furnish same to first applicant in a township for 25 cents (in stamps), which merely covers cost of papers, etc., and require building to be erected within sixty days from date of permit. Applications can be made direct to me by mail, and in all cases must be accompanied with description of land on which you wish to build (section, town, range and quarter).

Above special proposition will be withdrawn July 1, 1889. Agents with good references wanted in every county—stockmen preferred.

Circulars on application. Any party building the Sanitarium, or adopting or using any fence or plan of its construction without first obtaining a Permit or Farm Right, will be subject to prosecution for infringement, and will be proceeded against accordingly.

E. M. CRUMMER,
Patentee and Owner,
BELLEVILLE, KAS.



The Imported CLYDE Stallion

"KNIGHT OF HARRIS" 995 (2211)

Will make the season at Prospect Farm, three miles west of Topeka. \$20 to insure. H. W. McAFEE.

SEEDS

J. C. PEPPARD, 1220 UNION AVENUE.
MILLET A SPECIALTY.
Red, White, Alfalfa & Alsike Clovers.
Timothy, Blue Grass, Orchard Grass, Red Top,
Onion Sets, Tree Seeds, Cane Seed, Etc.
KANSAS CITY, MO.



1869 **WARD BROS.,** 1889
Oneida, Nemaha Co., Kansas,
BREEDERS OF

KEYSTONE STRAIN OF BARRED PLYMOUTH ROCKS & CRYSTAL STRAIN OF S. C. WHITE LEGHORNS.

On eight entries of S. C. White Leghorns at large Poultry Show at Denver, Colorado, last February, we won first (94%), second (94%), third (93%), fourth (92%), on cockerels. First (94%), second (94%), and fourth (94%), on pullets, and second (188) on breeding pen. We breed from high-scoring and premium birds, and can furnish fresh eggs at \$2.00 per thirteen; \$5.00 per thirty-nine; and fowls for exhibition or breeding. Will guarantee shipments of stock and eggs to be as represented, and to reach destination in good shape. Express paid on all cash orders for thirty-nine, if ordered at one time.

TWENTY STALLIONS

Reserved for the Spring Trade of 1889.

Will be Placed on Sale March 25th,

20 PERCHERON and FRENCH COACH STALLIONS—all choice animals—Prize Winners at the Three Great Shows of France, 1888, as follows: That of the Societe Hippique Percheronne at Nogent-le-Rotrou, the Government Show at Alencon, and the Horse Exhibition of Paris. I have found each year that a number of my customers could not conveniently buy until late in the season, and it was to accommodate these that I last fall made a reserve of TWENTY of my BEST STALLIONS, old enough for service, which will be placed on Sale March 25th, 1889, it being my determination to so control my importations that I can offer purchasers a first-class Horse any day in the year.

A Satisfactory Breeding Guarantee given with each Animal Sold.

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